ENERGY SECURITY FOR THE EUROPEAN UNION AND TURKEY: HARMONY OR DISCORD: A CRITICAL GAME OF MUTUAL BENEFITS

By

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To my family

ABSTRACT

ENERGY SECURITY FOR THE EUROPEAN UNION AND TURKEY: HARMONY OR DISCORD: A CRITICAL GAME OF MUTUAL BENEFITS

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The issue of energy plays a critical role for energy-rich and energy-dependent countries in today's international political system. Countries like Russia have an abundance of energy resources, and this situation has resulted in European energy-dependent countries being cast into a critical position. As a result, energy security debates within the EU have increased dramatically and have caused countries to focus on the security of energy resources. Increasing energy demands and decreasing domestic production places the EU in a very difficult position. In order to lessen the dependency on Russia for energy resources, the EU and member states have had to seek alternative energy resources and energy routes. Given this reality, the role of Turkey in EU energy security has become very critical, as Turkey is a geographically bridge linking energy resources and the EU. Furthermore, it can be a fourth artery for the EU and Turkey can take advantage of this role as it applies for EU membership. However, the EU is not a unified body, and member states have different perspectives and decision making mechanisms. It is for this reason that every member state holds a different opinion about the role of Turkey in relation to the issue of energy. However, that Turkey is a crucial player in this arena crucial role is undeniable, so the EU has to consider Turkey's role and make necessary arrangements before making energy security decisions.

ÖZET

AVRUPA BİRLİĞİ VE TÜRKİYE İÇİN ENERJİ GÜVENLİĞİ: UYUM VEYAHUT UYUMSUZLUK: KARŞILIKLI ÇIKARLARIN KRİTİK OYUNU

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Anahtar kelimeler: Avrupa Birliği, Enerji Güvenliği, Türkiye'nin Rolü, Hükümetlerarasıcılık, Türkiye'nin üyeliği, Rusya, Boru Hatları, Enerji Yolları, Doğu Avrupa Ülkeleri

Günümüz uluslararası sisteminde enerji konusu enerji zengini ve enerjiye bağımlı ülkeler için çok önemli bir yere sahip. Rusya gibi ülkeler enerji bakımından oldukça zengin ve bu durum Avrupa ülkeleri gibi enerji için dışa bağımlı ülkeleri kritik bir pozisyona sokuyor. Bunun sonucunda Avrupa Birliği'nde enerji güvenliği tartışmaları gün geçtikçe artıyor; ülkeleri enerji kaynaklarının güvenliği konusuna odaklanmaya zorluyor. Artan enerji ihtiyacı ve azalan yerli üretim Avrupa Birliğini daha da zor bir duruma sokuyor. Enerji kaynakları için Rusya'ya olan bağımlılığı azaltmak için, Avrupa Birliği ve üye devletler alternatif enerji kaynakları ve yolları bulmak zorundalar. Bu gerçekle birlikte, Türkiye'nin Avrupa Birliğinin enerji güvenliğindeki yeri kritikleşiyor; Türkiye Avrupa ve enerji kaynakları arasında adeta bir görevi görüyor ve hatta ileride Avrupa'nın dördüncü enerji arteri olabilir. Hatta Türkiye bunu tam üyelik süreci için kullanabilir. Ancak, Avrupa Birliği bütünleşik bir yapı değil ve üye devletler farklı görüşlere ve karar mekanizmalarına sahipler. Bu sebepten dolayı, her üye devlet Türkiye'nin enerji güvenliğindeki yeri hakkında farklı bir bakış açısına sahip. Yine de Türkiye'nin rolünün önemi inkâr edilemez, bu yüzden Avrupa Birliği, enerji konusunda kararlar alırken Türkiye'nin rolünü göz önünde bulundurmalıdır.

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ABBREVIATIONS

/person:	per person
/y:	per year
AGP:	Arab Gas Pipeline
bcf:	billion cubic feet
bcm:	billion cubic meters
BP:	British Petroleum
BTC:	Baku-Tbilisi-Ceyhan
BTE:	Baku-Tbilisi-Erzurum
CEE:	Central Eastern European
EC:	European Community
ECSC:	European Coal and Steel Community
EEC:	European Economic Community
EEC:	Exclusive Economic Zone
EP :	European Parliament
EU:	European Union
Euratom:	European Atomic Energy Community
IEA:	International Energy Agency
LNG:	Liquefied Natural Gas
mcm/mm^3:	million cubic meters
OECD:	Organization for Economic Co-operation and Development
OPEC:	Organization of the Petroleum Exporting Countries
RWE:	Rheinisch-Westfaelishes Elektrizitaetswerk
SEE:	South Eastern European Countries
SEEP:	South East European Pipeline
TANAP:	Trans-Anatolian Pipeline
tcm:	trillion cubic meters
TGI:	Turkey-Greece Interconnector
U.S.:	United States
UK:	United Kingdom
UNFCCC/FCCC:	United Nations Framework Convention on Climate Change

INTRODUCTION

> "…Europe's energy dependency not only has serious implications for the environment, human rights and development in countries that supply Europe's energy needs. It also creates rising insecurities in Europe as a consequence of the Union's reliance on foreign energy sources. This scenario conflicts with EU climate change objectives to reduce emissions and provisions of the Lisbon Treaty with regards to sustainability and EU activities and policies that have an impact on countries outside the EU."
>
> Elena Gerebizza (Energy and climate finance officer at the Campaign for the Reform of the World Bank)

In today's world, one of the most important concerns for states is securing their energy needs. This is because energy resources, which are important for the state's welfare, are not distributed equally in the world. For that reason, many countries are dependent on other countries that have a greater supply of energy sources and can therefore export to others. That's why protecting these energy supplies and securing one's energy source has become critical issues within international relations.

Energy resources and security is on the top of the agenda for many states as well as within international politics. Its importance has been rising since the second half of the 20th century. It is certain that energy security will remain one of the most important issues in international relations for the near future. It is possible that this issue may become less crucial if states' dependency on natural gas, oil or fossil fuel decreases, but this does not seem likely at the moment. With regards to this current situation, it is possible to argue that energy security has reached the same level of importance as economic security and national security today. It could be confidently argued that energy security is one of the most critical issues for almost all the countries in the world. This is also why the question of energy resources goes beyond economic concerns and emerges as a key security issue for countries. Consequently, it is possible to see the concerns with regards to energy shaping states' foreign policy-making processes. This is why, this thesis rests on this starting point that energy security and resources have acquired a vital importance for most of the states in the world. As German Chancellor Angela Merker always express the importance of the energy security, and she

said: “"We cannot go on living day-to-day. We need a long-term strategy," [1] Moreover, she had urged EU leaders to discuss questions such as how much energy would the bloc need over the coming 15 years, how can it be supplied, which sources of energy should be given priority.

When turning to one of the largest economic blocs in the world, the European Union, one could see that energy concerns have also impacted the EU's decisions and policies with regards to international politics. For instance, if we look at the early years of the European integration- the 1950s, the founding treaties of the EU- Paris and Rome Treaties had energy security at their very core. "Through the consolidation of basic production and the institution of a new High Authority, whose decisions will bind France, Germany and the other countries that join, this proposal represents the first concrete step towards a European federation, imperative for the preservation of peace.", Schuman said.[2] First, the 1951 Paris Treaty was the milestone for regulating the energy sector with the creation of the European Coal and Steel Community. Second, the 1957 Rome Treaty established the second of the European communities, the Euratom which was also about energy resources. While both of these treaties indicated the beginning of the EU's energy policies, the process of integration with regards to energy policy was very gradual and evolved slowly over time. In order to assess the increased awareness about energy by the EU member states, one must refer to the OPEC crisis of 1973, when the EU's dependence on imported resources of energy became dramatically clear. Robbie Diamond, President and CEO of Securing America's Future Energy (SAFE) states that In 1973 we should have learned a harsh but valuable lesson about dependence on the Arab world for the lifeblood of our economy and taken steps like Brazil and South Africa did to become more independent. [3] The 1973 oil crisis painfully increased the awareness of how developed countries were vulnerable to external oil shocks, and since then, we have begun to see an increased awareness in the EU towards energy security.

If oil was one aspect of the energy concerns for the EU, natural gas clearly constituted the other. The EU's dependence on imported natural gas became more pronounced with the accession of Central and Eastern European states that were clearly dependent on the flow of natural gas from Russia. With the enlargements of 2004 and 2007, the EU's dependency on

[1] Merkel, Blair say EU needs common energy security policy http://english.peopledaily.com.cn/200602/18/eng20060218_243736.html.
[2] Robert Schumman, 1950. Declaration of 9 May 1950. *Europa*
[3] The 1973 Arab oil embargo: Why we have a Strategic Petroleum Reserve in the first place, http://communities.washingtontimes.com/neighborhood/truth-be.

Russian energy sources increased correspondingly, given that the new member states had high import dependency rates at the time on Russian energy resources. This was partly due to their specific economic ties from the Soviet and the Warsaw Pact era. In addition to this situation, disruptions in energy supply from Russia to Ukraine in 2006 and 2008 have led to doubts over energy security, in general, and with regards to dependence on Russia, in particular, as President Putin has frequently emphasized in 2006 statement that "existing socio-economic conditions, and also the strategy for Russia's exit from the deep crisis and restoration of her former power on a qualitatively new basis demonstrate that conditions in the natural resource complex remain the most important factor in the state's near-term development." [4]. This understandably caused increased concerns in the EU regarding energy security.

According to the European Commission, the EU's energy dependency rate in 2006 had reached 50% and it classified itself as the world's leading energy importer (European Commission, 2006a). This is expected to increase to approximately 70% by 2030. Still, there are some other views that since the EU population and economic growth are both declining, this is also decreasing their needs for energy. This means that these expectations are still diverging. Apart from these diverging views, specifically, the EU's dependence on natural gas is increasing much more so than its dependence on oil. As a result, the member states are increasingly concerned about securing natural gas resources as well as uninterrupted flow of natural gas to the EU. This highlights why the EU has a growing interest on the transport of energy resources, specifically pipelines. At the same time, the thesis looks into the EU's position on the sources of energy, with respect to the diversification of energy suppliers in order to reduce the EU's dependence on Russia. To this end, at their March 2007 summit, EU member states moved to fasten European coordination to help secure and diversify energy supplies, increase the development and use of renewable and alternative energy resources within the EU, and also reduce energy demand and consumption. Even though member state governments keep reluctant to cede national sovereignty over energy-security aspects of their foreign policies, they have set binding EU-wide targets for the use of renewable energies and biofuels, and has agreed to ambitious but non-binding energy efficiency and carbon emission reduction targets for the year 2020.[5]

[4] Paul J. Saunders, Russian Energy and European Security a Transatlantic Dialogue, , The Nixon Center, February, 2008.
[5] Belkin, Paul, The European Union Energy Security Challenges, CRS Report for Congress.

In both of these aspects, one country, Turkey, emerges as a critical player. Turkey comes into the scene of energy security precisely at this point as an energy hub, due to its critical geographical location. This is why, this thesis focuses on the European energy security, Turkey's role within this important issue, and how this, in turn, may affect Turkey's potential membership within the EU. For this reason, the thesis analyzes the member state preferences on energy issues. This study refers to oil and natural gas as the main energy resources since they constitute more than 60% of the energy consumed in the EU (European Commission, 2008a). Yet, one also needs to keep in mind that the EU's dependence on oil and gas is also destined to decrease parallel to the decline in population and economic growth rates. Having said that, no matter what the future demand might eventually become, it is highly likely that Turkish role in the transport of these resources will remain critical.

The EU has already tried to develop different ways to solve its energy security problem, and its main objective is to diversify both energy resources and transport routes. Accordingly, the EU has developed specific mechanisms such as the Trans-European Networks to diversify its supply routes by building alternative routes. One of the critical problems in the EU's ability to put together a common energy policy is the member states' diverging positions on this issue. This, in turn, makes member states critical actors in shaping the EU's energy policy as well as the future of the transport routes. This of course is a result of the differences among the EU members on with regards to energy dependence.[6]

Overall, when the larger picture is analyzed, it can be seen that the energy issue has brought new security problems to Europe and has pushed the Union to develop new ways in order to provide energy security. Additionally, this thesis also suggests that Turkey, as a candidate country, should be included in the potential solutions for providing energy security. Thanks to its geographical position and natural presence of the European system with the membership to Customs Unions, NATO, and the Council of Europe, Turkey is not a stranger to the EU, and its role is increasingly becoming critical for Europe. This is due to the fact that Turkey is located at the heart of the energy routes. Even more importantly, it is increasingly playing a critical regional role and might help the EU find alternative energy sources. Thus, since energy security is an important problem for the European Union, Turkey's inclusion to the EU as a full member would help the EU increase its security as well as foster a more robust scheme for energy security.

[6] Saunders, Paul J., Russian Energy and European Security; A Transatlantic Dialogue, The Nixon Center, February 2008.

In short, this thesis proposes that energy security is an important issue for the European Union, increasing its vulnerability to energy suppliers. After the oil crisis of 1973 as well as the transport crisis of 2006, the EU became more aware that it would face significant challenges unless it diversified its energy resources. However, not all member states are dependent to the same degree on energy suppliers in the East and therefore, they have different perspectives about the energy issue. As a result, the issue of energy security is further complicated by the member states' divergent preferences (Moravscik, 1993; Muftuler-Bac and Baskan, 2011).

In order to focus more on the problems that the EU has been facing with regards to energy security and to analyze the Turkish role on European energy security, the thesis explores first the European Energy Security and then focuses on the Turkish role in further detail. Accordingly, the main research question in this thesis is:

"Taking into consideration the vulnerability of the European Energy Security and the candidacy of Turkey to the EU, is it possible to conceptualize a new role for Turkey with regards to European energy security and if so, how would this role might affect the Turkish membership in the EU?"

The thesis proceeds with its analysis in three different parts. First, the thesis analyzes the evolution of the European energy security since the 1951 European Coal and Steel Community and after the oil crisis in 1973 and 1979. Secondly, the thesis investigates the emergence of the EU's energy security policy, or lack of thereof, as well as the member states' preferences regarding the energy issue. This part also focuses on the preferences of three important member states, namely Germany, France and the UK, as well as some member states in Central and Eastern Europe, as these are the ones directly affected by energy security. The main theoretical framework for this analysis is the rational intergovermentalist logic, which focuses on the member states' preferences as the key to assess EU- level policies. As Moravcsik stated (1993), according to rational intergovernmentalism, the preferences of member states are the key parameters which affect membership status of a candidate country. These preferences associate material benefits being as economic and security fields.[7] Joschka Fischer, the former minister of foreign affairs of Germany, referred to the Turkish role in EU energy security and Turkey's accession to the

[7]Moravcsik, A. (1993) "Preferences and power in the European Communities: a liberal intergovernment approach."Journal of Common Market Studies 31–4: 482.

EU as being tied to one another in his 2004 declaration: “Some old-minded persons are talking about that membership of Turkey into the EU would affect negatively. However, I cannot ignore realities. Turkey has an extremely important strategic actor for Europe”.[8] At the intergovernmental level, the relative power of member states determines which states’ preferences will be reflected in EU policies. This statement refers to the fact that preferences of more powerful actors in the EU are a crucial factor in the process of interstate bargaining and in EU policies. Therefore, if the most powerful member states within the EU, such as UK, France and Germany, came to a mutually agreed upon conclusion regarding Turkey’s role on European energy security, the positions of other, more minor member countries would probably be shaped accordingly. In this study, the analysis of member state preferences takes into account the states’ GDP, dependence on imports and their energy dependence on third parties.

Thirdly, the thesis analyzes the possible role that Turkey might play in European Energy security with an emphasis on the regional and geographical advantages of Turkey. Moreover, this section of the thesis focuses on the multiple pipelines that pass through Turkey, such as the Nabucco project. This analysis ties into the Turkish role in European energy security as stressed by the EU Commission. The Commission says (2008) “"the development in the southern Caucasus also highlighted Turkey's strategic significance for the EU energy security, particularly by diversifying supply routes, and underlined the importance of closer energy co-operation between Turkey and the EU."[9]Lastly, it is also mentioned that Turkey’s possible role in European Energy Security act as an added value for Turkey’s potential membership to the EU. There are some obstacles facing Turkey in terms of its membership, but material benefits such as the energy security issue may counteract or at least attenuate the effect of these obstacles.

The thesis would hopefully contribute to the literature on the European Energy Security by its analysis of the possible Turkish role as well as by its analysis of the diverging member state preferences as the key to understanding EU energy policies. It is now without a doubt that the EU needs to find new alternatives for the energy sources for its own sake, and should make the necessary arrangements within energy security to make its position more stable. This will be critical for its future. If not, Russia will continue to have significant

[8] Muftuler-Baç, Meltem, A Glance to the relationships between Turkey and the EU from a security dimension, İstanbul: TESEV Yayınları, November 2006.
[9] Commission hails Turkey’s role in regional stability, http://euobserver.com/enlargement/27025.

leverage on the European continent. Turkey can also benefit from this situation and be given full membership within the EU thanks to its role as an energy hub, thus becoming the fourth artery of the Union.

The thesis's main arguments center on the critical role that Turkey is expected to play in European energy security. This role is discussed within the perspective of material benefits to both parties. The thesis notes that the EU suffers from its own intergovernmental framework when formulating an overarching EU-level energy policy. In addition, EU members hold divergent positions regarding Turkey's role in energy security. Thus, these different interests and preferences of the member states keep the EU from talkingwith a single, united voice. In other words, member states shape their position about energy policy and energy security according to national preferences and Turkey's role in the energy security is not equally valued by all the member states. That is to say, dynamics and the interests of the core member states prevent the EU from developing a common energy policy and position. For that reason, the benefits that Turkey might derive from its contribution to the European energy security could be relatively limited. A further complication within this picture comes with the increased ties that the EU is trying to develop with the Middle East and Caspian region countries in order to diversify its energy resources. This is of course how the EU wants to decrease its dependence on Russia, which is the most powerful and biggest country in the region and has proved to be the biggest challenge for the EU. We could expect that Turkey might use its geographical and historical ties with these countries in terms of energy ties in return to progress with its EU membership.

CHAPTER 1- ENERGY SECURITY OF THE EUROPEAN UNION

1.1. European Energy Security

> '[u]njust manipulation or interruption of energy supplies is as much a security threat as is military action. Post-soviet countries have been experiencing that on a daily basis, as Russia's appetite for using energy as a political weapon is growing.'
>
> Czech Deputy Prime Minister for European Affairs AlexandrVondra
>
> 'Europe may soon have to decide whether to trust Russia's promise to guarantee future energy supplies. That would also mean overlooking its authoritarian ways and putting aside fears that it will use its energy resources as a political weapon against other countries. Will Europeans be willing to exchange their dignity, spiritual heritage and general beliefs in exchange for gas supplies?'
>
> Former Lithuanian President Vytautas Landsbergis

The common point in both of these declarations from two different leaders of Central and Eastern European countries' is that they illustrate their perceptions and key concerns with regards to the European energy security. They reflect the uneasiness among some EU members about their dependence of Russia and might even evoke memories of their oppression under the Soviet rule during the Cold War years. The main issue here ties back to the overarching problem: the issue of diversification of suppliers of both oil and gas, which has emerged as the key concern for the European states with regards to energy security, both at the present time and for the future.

This chapter analyzes current European energy security with a focus on the history of energy security in Europe and current developments. Today's international politics are more concentrated on energy issues, since there is a significant shift from energy policy to energy

security.[10] This situation is due to energy resources becoming the key element of the power in the international arena. Dependency as a result of lack of resources creates important problems for countries within international politics, since countries like Russia use this power against importer countries. This chapter addresses these issues first by looking into the historical developments in the EU with regards to energy security. Secondly, it focuses on the multiple crises with regards to energy security, specifically the 1973 OPEC crisis for oil and the 2008 crisis over natural gas. Thirdly, the chapter analyzes the EU's responses these crises. Lastly, today's energy security in Europe with the observation of Energy Policy will be explained.

The main purpose is to demonstrate the evolution of the EU's energy policy with regards to oil and natural gas in different areas, as well as show the diverging preferences of the member states as a factor impeding the evolution of a supranational energy policy for the EU. Shortly, the chapter looks at the history of European energy security analyzing the main steps of the EU related to the energy issue. The importance of energy security for states is illustrated by Philip Lowe, Director General DG Energy European Commission, as "a safe, secure, sustainable, and affordable energy supply is a key to economic stability and also, it is important for strategic interests for global players".[11] Thus, the energy security concerns of states also have significant economic implications. The conflicts of interests at the global level on energy take multiple forms. For example, the American invasion of Iraq in 2003 could be indirectly linked to the desire to control the energy resources in the Middle East. On the one hand, Russia emerged as a major power with regards to energy politics since it has the richest oil and natural gas resources. On the other hand, the EU and China-two major economies- are vulnerable to energy fluctuations as they are, to a very large extent, dependent on outside resources for energy. This is why in international politics, energy and sharing of energy sources became an important source of contestation and an element shaping the distribution of power. It is, therefore expected that for the EU, energy security is one of the key areas of future collaboration. This is partly tied to the fact that the EU receives most of its energy needs from Russia. Therefore, relations with Russia are very critical for the EU. Moreover, the EU knows that China is becoming a competitor of the EU because it is also seeking energy resources. Therefore, the Commission has stressed the importance of

[10]Oklestkova, Ivana&Karasek,Tomas, The Impact of CEECs on the Changing Energy Security Concept of the EU, Originallypublished in: European Integration, Structural Change and its Impact on European Foreign Policies. Shanghai: ECNU Publishing House, 2008.
[11]Philip Lowe, Energy; a factor of peace and prosperity in an unstable world, the European files: Security of Energy Supply in Europe.

increasing cooperation between the EU and China in an attempt to decrease competition, as stated in the Commission speeches. President Barroso reiterates this point as:

> **"**We are both global stakeholders. Although we have had very different pasts, one thing is clear: we share to a large extent a common future, a future, which will be determined by the manner in which we use the resources of our planet. This is particularly true of energy. Energy is one issue where there is clear global interdependence, where our planet is truly interlinked….In this light, it is evident that the EU and China create value for our world by engaging together into a strong energy partnership, which we have been building over the last years."[12]

In these conditions, many member countries of the EU realize that energy security is very important for Europe in the new world order because the unipolar system which is not the case now changed and the new world order appears to be multipolar and it is being played with new actors. This is illustrated by Van Rampuy, The President of European Council as:

> "Energy issues will define the politics of 21st century. Knowing that energy could become a really scarce good in a growing world economy, the battle for energy may even become a matter of survival, of war and peace. "[13]

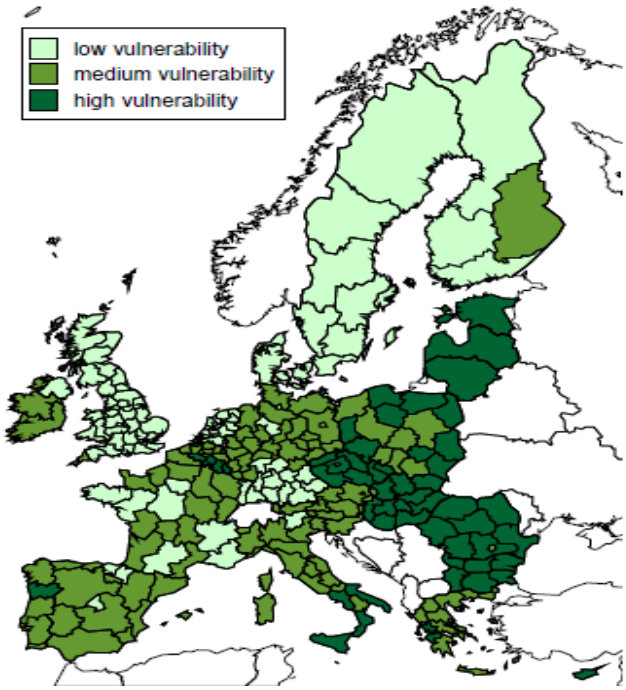
Yet despite the seeming common position put forward by the Council President, the member states of the EU have different rules and regulations amongst themselves; in the same way, the energy issue shows a divergence of interests between them. Member states have different energy needs given that their access to energy is different and therefore, the perception of importance varies accordingly. For instance; newer member states tend to be more dependent on Russian gas, and have less leverage in such negotiations. For instance, dependence on Russian gas for energy demand in the EU15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom) is 5%, whereas among states that have joined since 2004 this figure is closer to 15%.[14] This is a sharp difference particularly between Western and Eastern

[12]José Manuel DurãoBarroso, "Deepening EU China co-operation on energy: Working together to meet global challenges".
http://eeas.europa.eu/china/events/visit_li_keqiang_2012/press_release_energy_cooperation_en.pdf.
[13]Herman Van Rompuy, Developments in EuropeanGovernanceandEuropeanEnergyPolicy, The European Files: Security of EnergySupply in Europe.
[14]EU-Russia relations and the diversification of gas supply routes, published on 9 May 2012. http://ecfr.ideasoneurope.eu/2012/05/09/eu-russia-diversification-of-gas-supply-routes-to-europe/.

European countries. Realizing the dependence on Russia, let's look at Ivan Ivanoc's, Bulgarian Member of Parliament from the rightest Democrats for Strong Bulgaria Party and a member of the parliamentary Committee for Economic Policy, Energy, and Tourism words: "The main weaknesses of us, Bulgarians, is that South Stream does not do any good to lessen the energy dependence of our country. In practice with this project our unilateral dependence on Russia continues."[15]

In short, the EU does not hold a common view about the energy issue due to their power against energy issue. The geographic distribution of energy is shown in the figure below.

Map 1.1: European geographic distribution of energy vulnerability



The first difference is the split between the old member states of the EU-15 and the 10 new member states in Central and Eastern Europe (CEE). This is precisely due to the low energy efficiency in the production of goods and services in the CEE regions, in combination with low income levels. In contrast, household energy consumption in the CEE regions is in

[15] New gas deal makes Bulgaria more dependent on Russia, the Epoch Times. http://www.theepochtimes.com/n2/world/new-gas-deal-makes-bulgaria-more-dependent-on-russia-39402.html.

general (in reflection of the lower standard of living) lowest in the EU, while with respect to energy dependence the CEE countries are mostly at intermediate levels, with the exception of Poland, which has a relatively low level of dependence. Therefore, the CEE regions use a lot more energy than the other EU regions on average to produce their goods and services, which, in turn, means that a larger proportion of their output has to be devoted to the purchase of energy.

Having said that, the European Commission has nonetheless started to work on energy and energy security in order to find a common voice for the EU states. The Treaty on the Functioning of the European Union (TFEU) involves a separate chapter on energy (Article 194), making some areas of energy policy a shared competence, signaling a move towards a common energy policy. With TFEU, a Member State, nonetheless, keeps its right to "determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply"(Article 194, §2).[16]

The general long-term European energy policy objectives were first mentioned in 1995 through the publication of a Commission 'White Paper on Energy Policy for the EU' (COM (95) 682). It was stated that energy policy must form part of the general aims of EU economic policy based on market integration and deregulation, and that public intervention must be limited to what is strictly necessary to safeguard the public interest and welfare, sustainable development, consumer protection, and economic and social cohesion. Since the 2000 publication of the Green Paper, the EU has a clearer strategy of energy security. These goals are further elaborated in the EU documents, 'Towards a European Strategy for the security of energy supply' (COM(2000) 769), the 2005Green Paper on 'Energy Efficiency: Doing more with less' (COM(2005) 265) and the2006 Green Paper on 'A European Strategy for Sustainable, Competitive and Secure Energy' (COM(2006) 105).

These documents summarize the aims of the European energy policy in a more integrated way, in order to secure affordable energy supplies, respect market mechanisms, promote energy efficiency and protect the environment.[17]Another important step was taken with the Lisbon Treaty (2007) which stated the main aims of the EU's energy policy as ensuring the functioning of the energy market, assuring the security of energy supply in the Union, promoting energy efficiency and energy saving, developing new and renewable

[16]EnergyPolicy: General Principles.
http://www.europarl.europa.eu/ftu/pdf/en/FTU_4.13.1.pdf
[17]Ibid.

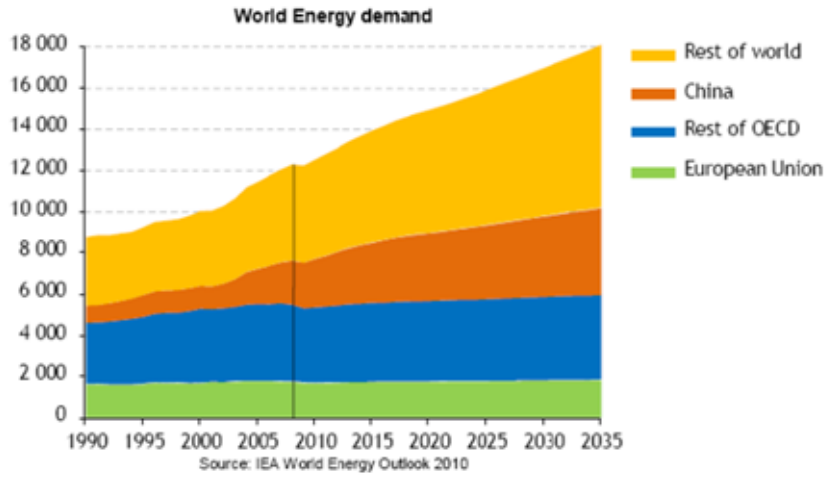
forms of energy, and promoting the interconnection of energy networks. Moreover, after the gas crisis of 2009, Regulation 994/2010 on the security gas supply came into force on 2 December 2010. According to this regulation, the primary goal is the implementation of measures covering mechanisms for handling crises. Following this, on 17 November 2010, the European Commission created a strategy on priority infrastructure by 2020. With regards to this strategy, major investments would be essential over the next 10 years.

Although their diverging views, a 2005 German-Russian gas pipeline agreement and Russian manipulation of gas and oil flows to the European market have become a turning point as a sense of urgency among European leaders regarding the need for a more coordinated strategy. These events create with growing concern among the European public and political classes regarding the link between energy production and consumption, and also global climate change. Beside 2005 German- Russian gas pipeline issue, disputes between Russia and Ukraine and Russia and Belarus have created some undesirable consequences of European dependence on Russian energy resources.[18] Many European observers have stated the Russia-Ukraine and Russia-Belarus gas and oil crises as "wake up" calls exposing Europe's energy security vulnerability. Moreover, the crises raised the dual questions of Russia's reliability as an energy partner and Moscow's willingness to use its energy power as a political weapon. In response, European leaders have supported coordinating decisions on energy supply and decided to present a unified front to producer nations like Russia.[19]

The EU provides more than one quarter of the world's industrial production so it requires considerable energy.[20] Even though there is some decrease in this output with the economic crisis, in the near foreseeable future there does not seem to be a radical change in sight. This means even though EU energy needs might not increase dramatically; there still is a substantial need for energy even at the current levels. The EU's 27 member states account for approximately 17% of the world's total energy consumption.[21]

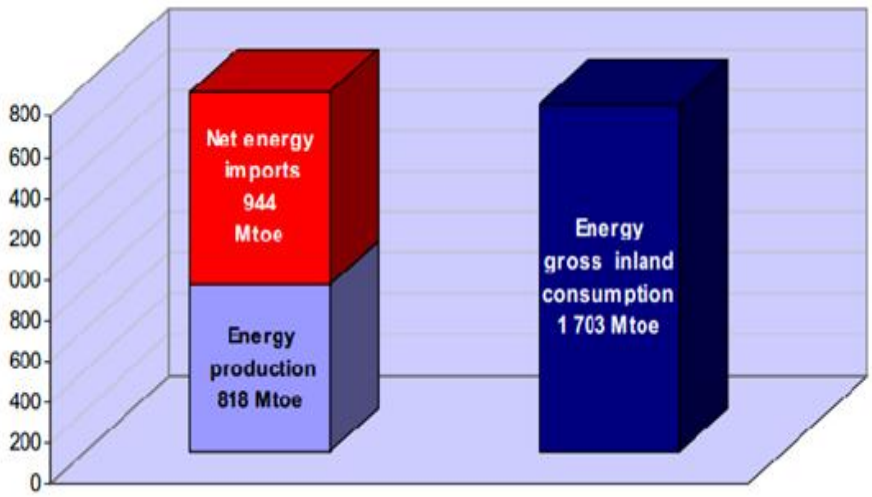
[18] Belkin, Paul, The European Union's Energy Security Challenges, CRS Report for Congress, 2008.
[19] "Polish Press Slams Germany's Schroeder over Gas Pipeline Deal," Agence FrancePresse, December 12, 2005.
[20]2020 Vision: SavingOurEnergy, Directorate General forEnergyand Transport,. http://ec.europa.eu/energy/action_plan_energy_efficiency/doc/2007_eeap_en.pdf.
[21] Country Analysis Briefs: European Union, Energy Information Administration, January 2006.

Figure 1.1: World Energy Demand 2010



The figure above shows the world energy demand which is on the rise. Although the consumption of energy per person is less than Japan and the USA, its energy needs are equal to 1,7 billion tons of oil. When this is considered, the resources of the EU are insufficient for the member states. With this respect, the figure below shows the insufficiency in general because according to the figure net imports are higher than the energy production.

Figure 1.2: Production, net imports and consumption of energy in the EU in 2009



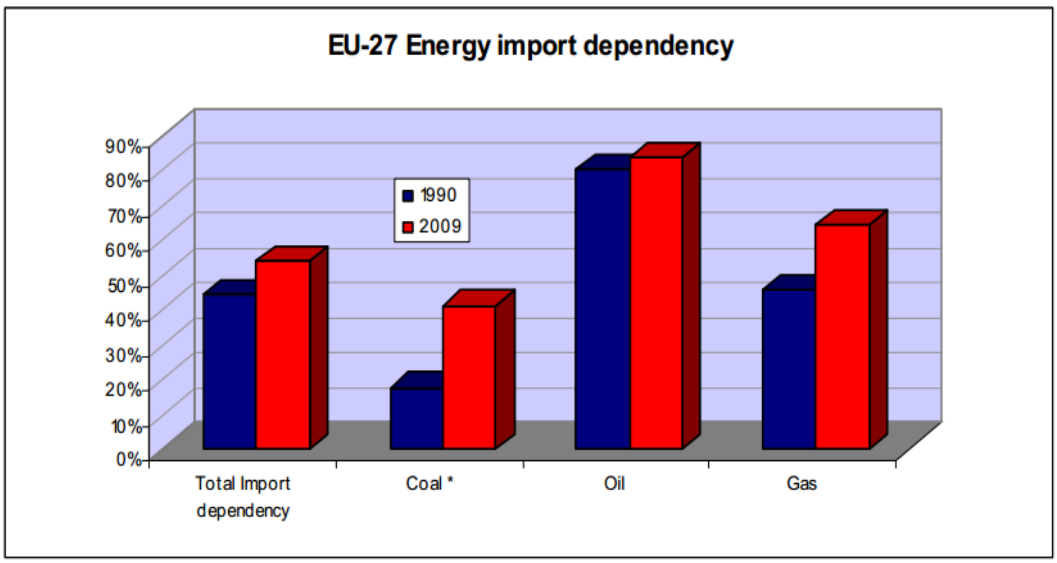
Source: Eurostat, May 2011

Furthermore, domestic production currently sustains 46% of the energy used in Europe. The EU's important potential source of domestic energy is renewable energy. Today

it is about 9% of final EU energy consumption.[22]For oil and natural gas need, the EU must resort to importation. However, with regard to nuclear energy, the member states like France are using their resources and technologies. Nevertheless, nuclear energy is not enough for the EU energy needs; it provides approximately 14% of the EU's energy needs.[23]For this reason, the European Union turns to or prefers oil and natural gas. One third of imported oil is received from Russia. The other countries that provide the EU with oil are Norway (20%), Saudi Arabia and Libya (10%). Beside these countries, Iran, Iraq, Algeria and Nigeria are the supplier countries for the EU. It is known that the EU imports five times more oil than its oil production, so it is dependent on outside resources for the energy.[24] This is why the EU is dependent on energy sources other than its own, in order to both sustain industrial production and as well as for domestic consumption needs of its citizens. The table summarizes the energy needs in the EU and also demonstrates the differences among the EU members on imported energy sources.

In the EU, energy needs are significant for both oil and natural gas and to this end import dependency is seen at the figure below.

Figure 1.3: EU-27 Energy Import Dependency

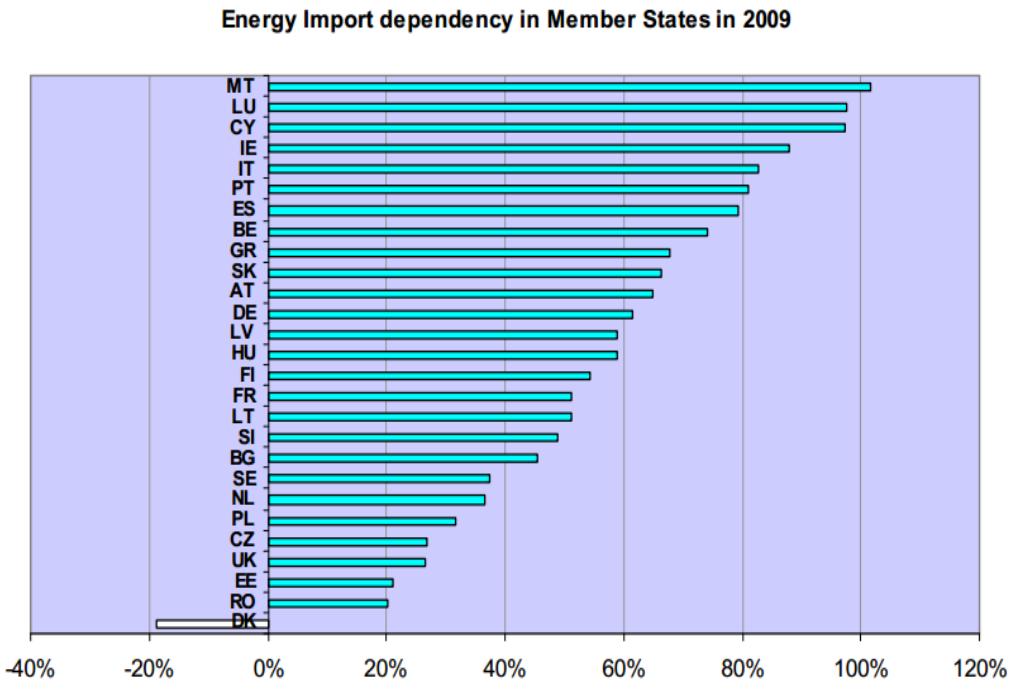


Source: Eurostat May 2011- Coal and other solid fuels

[22]EU Energy Security and Solidarity Action Plan: 2nd Strategic Energy Review, retrieved from: http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/703&type=HTML
[23] Energy, transport and environment indicators, 2011: 34-36
[24]Ibid.

The figure below shows the import dependency of member states. It also shows the differences between the dependency levels of member states.

Figure 1.4: Energy Import Dependency in member States in 2009



Source: Eurostat May 2011

Some European states like the Netherlands, the UK and Norway have the capacity to produce natural gas but the need is rapidly increasing so the EU has to import natural gas from outside; that creates dependency on external sources. Actually, the supplier countries in Europe (Norway, the Netherlands and the UK) are the most secure natural gas resources for Europe. However, the resources of the UK are dwindling and the resources of Norway are not enough to meet the energy needs of Europe. Therefore, the EU tries to find different alternatives. States that are at the North of Europe utilize Russia as their supplier, and others that are at the South of Europe, utilize Algeria, Libya, Nigeria and other African countries as the supplier. [25]

1.2. The Roots of European Energy Security

Energy is very important for every aspect of our life; a life can not be thought without energy. We continue our daily works with the use of energy. As energy is the case, the

[25]BP Statistical Review of World Energy, 2009.

security of this important commodity gain great importance. The world encountered wars due toc petroleum; or samely witnessed the attacks of pipelines as a result of conflicts between the states. Energy is a valuable but also, it can turn to a dangerous weapon, therefore its security is very crucial and vital for states.

In the same way, energy as a valuable commodity has always been very important for the EU since its very inception. It could be argued that the European Community was concerned about European energy security in Europe. Specifically, the issue of energy has long been in the control of the technocrats in the European Community. The establishment of the EU began with the unification of coal and steel mines between Germany and France, indicating the importance of energy security. Therefore, the Union was divided into three communities at the very beginning. The first one is the European Coal and Steel Community (ECSC), which was initiated by Jean Monnet and launched by Robert Schumann with the aim of making war "not only unthinkable but materially impossible" in 1950 and inaugurated with the Treaty of Paris in 1952 signed by West Germany, France, Luxembourg, Netherlands, Belgium and Italy –the original Six. The main aim of the community was to give the organization of Franco-German production of coal and steel to a higher authority, which will be above the state level hence creating a common market for these sources. It is important to point out that in 1950s, coal was meeting two-third of the total energy consumption and the share of oil was only 10%.

After this first step, the European Atomic Energy Community (Euratom) was founded in 1957 by the Treaty of Rome. Euratom established another common market, this time for nuclear energy, and its operation was left to a higher authority, which would be responsible for the development and distribution of nuclear energy and the sale of the surplus to non-community members.[26] The last community is the European Economic Community (EEC) which was charged with allocating responsibility for the energy sources such as electricity, oil and gas apart from ECSC's coal and steel, Euratom's nuclear responsibilities. While energy placed that much importance, the security of this commodity also became the crucial part of the EU policies.

The main steps taken on the issue of energy security since the EU was founded can be explained as follows. After 1991 *Energy Charter Declaration,* the 1994 *Energy Charter Treaty* was signed as: "provides a multilateral framework for energy cooperation that is

[26] "Nuclear energy: The European Atomic Energy Community (EURATOM)", European Comission. http://ec.europa.eu/energy/nuclear/euratom/euratom_en.htm.

unique under international law."[27] The Treaty was "designed to promote energy security through the operation of more open and competitive energy markets, while respecting the principles of sustainable development and sovereignty over energy resources."[28] Then, in the 1995 White Paper, *An Energy Policy for European Union*, regulations concerning the internal energy market were set. The first policy initiative was the *Green Paper: Towards a European Strategy for the Security of Energy Supply*, which is published in 2000. It involves major questions as how to define and how to protect "energy security".[29] These followed by the 2006 *Baku Initiative* which was introduced with the aim of establishing a cooperation mechanism between the Caspian Sea countries and the Black Sea region. In 2007 the Commission adopted a new policy. This puts energy at the core of European relations with the third countries. Moreover, this policy the transportation of Caspian energy resources became the major aim emphasizing the importance of Turkey and the Nabucco pipeline within an overall perspective.

Last but not least, the EU's energy security also takes account of environmental protection. With regard to this, the EU has recently made two policy objectives. The first one is the *EU 20-20-20 Climate Change and Energy Package* which foresees that the EU would achieve (1)20 percent decrease in greenhouse gas emissions in comparison to 1990 levels; (2) increase energy efficiency by 20 percent, and (3) give at least a 20percent share to renewable in the energy mix by 2020.[30] The second one about energy, specially the carbon market is the 2050 *Energy Roadmap* aiming to reduce the carbon emissions to 1990 levels below 80-95 percent by 2050. The EU's target is to provide a higher level of "decarbonisation", "energy security", and "competitiveness" in this report. The goal of the *Energy Roadmap* is to compose a long-term European framework energy market and involve all the stake holders in this network.

Concludingly, the EU has been created as an energy community and the notions of energy security and supply security are at the very core of the EU, especially after the first and the second OPEC oil crises in 1973 and 1979 and following 2006 and 2009 crises. As a result of being reliant on imports, the EU is highly vulnerable to any crises and interruptions in the imported gas supplies. The EU witnessed and still "faces serious energy challenges concerning sustainability and greenhouse gas emissions as well as security of

[27] Energy Charter, Website, "1994 Treaty"; http://www.encharter.org/index.php?id=28.
[28] Ibid.
[29] Europa, Website, "Summaries of EU Legislation, Energy". http://europa.eu/legislation_summaries/energy/index_en.htm.
[30] European Commission, Europe 2020, "Priorities". http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/priorities/index_en.htm.

supply, import dependence and the competitiveness and effective implementation of the internal energy market."[31]

1.3.The Problem of Security of Supplies

The term "energy security" became precisely important for the world and the EC after the first and second oil crises of 1973 and 1979. The first crisis was in 1973 that the Organization of Petroleum Exporting Countries (OPEC), which were operating as a cartel, put an embargo to the oil exported to the U.S. and the Netherlands because of these two countries' support for Israel in the Arab-Israeli War (Yom Kippur War).[32] As a result of the embargo, oil prices increased by more than 475 percent. After this first shock for the oil imports, the second OPEC crisis in 1979, which increased the prices by another 134 percent, occured.[33] As a response to these oil shocks, the International Energy Agency (IEA) was established in 1974 to "develop response measures, such as the establishment of emergency reserves, and to co-ordinate a collective response to any future major disruptions in oil supply".[34] These measures were precisely critical for countries which have critical import dependence and also is lack of the sufficient regulatory framework, such as the EC.

The first and the second OPEC crises of 1973 and 1979 brought the question of security of supply. As for this issue, alternative energy resources such as hydroelectric, atomic powers or more recently, renewable energy, would render a country independent from a single supplier. In 1974, after the first OPEC crisis, the Community agreed on the issue that the dependency on imports of oil which was 64 percent would be decreased by 50 percent by diversification and conservation policies. With this way, with the diversification strategy, the consumption of natural gas and other alternative energy resources such as renewable resources, and nuclear power increased. After these decisions, natural gas consumption reached that of oil and became the second most widely used hydrocarbon in the EU. The EU has limited natural gas reserves itself, and it has to import 65 percent of its consumption from outside.[35] However, this developments brought new problems: As a result of the demand increase for natural gas, the dependence on foreign suppliers, particularly Russia increased at

[31] Europa, Website,"Energy Roadmap 2050".
http://ec.europa.eu/energy/energy2020/roadmap/index_en.htm.
[32] IEA, Website, "Responding to major supply disruptions".
http://www.iea.org/topics/energysecurity/respondingtomajorsupplydisruptions/.
[33] Hitiris, Theo. *European Union Economics: 4th Edition*. Prentice Hall, 1998. pp. 327-331.
[34] IEA, Website, "Responding to major supply disruptions", *op. cit.*
[35] Eurogas, "Statistical Report 2011".
http://eurogas.org/uploaded/Statistical%20Report%202011_091211.pdf

the same time. With numbers, Russia accounted 37 percent of the total natural gas imports to the EU in 2006.[36]Same with the experienceof the OPEC crises, in 2006 and in 2009, two other crises happened, but this time they were due to gas. The gas supplies to the EU were cut off in 2006 and in 2009 because of political and economic tensions between Moscow and Kiev.[37] As a result of the cut down of the supplies by Gazprom, which is the state-owned Russian gas company, EU were left in the cold, especially the South East European states had hard times.[38] These oil and the gas crises indicated that the EU should diversify its supplies as well as suppliers and find more reliable sources. Experiencing these crisis, the EU understood the necessity of coherent policy measures to prevent further supply disruptions.

The table below reflects how the EU energy production and import values increase at the same time from 1960 to 2001. This means that even though the EU is able to produce some energy, it is not enough to meet the EU's consumption demands. This led to an increase in the EU's imports from other countries, especially from Russia as its main supplier.

Table 1.1: Primary energy production and import of the EU (Mtoe)

Year	**Production**	**Imports**
1960	360.3	206.2
1970	408.1	650.2
1980	584.3	687.6
1990	708.9	642.1
1995	740.1	651.1
2001	761.2	765.9
2008	842.7	1014.9

Source: Eurostat

[36] Eurogas, "Statistics 2006", pp. 30. http://eurogas.org/uploaded/Eurogas%20Annual%20Report%202006-2007_%20statistics.pdf.
[37] Henning Gloystein and Charlie Dunmore, "Russian gas supply falls further, EU says no crisis", Reuters, 2012. http://www.reuters.com/article/2012/02/03/eu-gas-supply-idUSL5E8D32MX20120203.
[38] David Gow, "Russia-Ukraine gas crisis intensifies as all European supplies are cut off", Guardian, 7 Jan 2009. http://www.guardian.co.uk/business/2009/jan/07/gas-ukraine.

Map 1.2: European gas constraints in perspective

Source: http://jia.sipa.columbia.edu/russia-and-europe%E2%80%99s-mutual-energy-dependence.

Table1.2: The import dependence ratios in the IEA and Eurogas Scenarios

Year	IEA Base Scenario	Eurogas
2007	59 %	59 %
2015	69 %	70 %
2020	76 %	80 %
2025	81 %	86 %
2030	84 %	89 %

Source: Christie, pp. 25.

World gas reserves are plentiful with the potential of at least sixty years consumption.[39] These reserves are at the hands of few countries such as Iran, Qatar and Russia. Therefore, Russia has no fear about the quantity of gas available. EU is still dependent on foreign energy sources, especially increasingly dependent on gas exports from Russia. For countries who choose to prohibit or tightly control nuclear industries, such as Germany and Italy, Russia is the key provider. Statistically, the EU's energy consumption is increasing day by day. Energy import dependence has always existed in Europe and it is expected to rise 71% by 2030. This dependence creates the question of security of supply, because supply issue is vital for Europe as a continent that is the center of industry. Therefore, the OPEC crises were very important for Europe in illustrating the EU's member states' dependence on external sources of energy- specifically oil. The Graph above shows energy dependency of Europe. Energy dependency indicates the extent to which an economy relies upon imports in order to meet its energy needs. The indicator is calculated as net imports divided by the sum of gross inland energy consumption plus bunkers.

1.4. The EU's Responses to Deal with Energy Crisis

As argued in the previous section, the EU has from time to time faced energy crisis and its ability to deal with these crisis depended on its ability to adopt common measures. This section addresses the EU's efforts in dealing with energy crisis and its energy dependence on external suppliers.

In the 1980s, the European Commission concentrated on the creation and deregulation of a "Single Market" for energy. In this regard, the need for integration of the current markets was understood and the energy market became the target of increasing competition. Almost simultaneously, the trade-off between energy and the environment entered the EU's agenda on energy security given thatthe production and consumption processes of the energy carry the potential to harm the environment. Therefore, environmental protection patterns were explored in order to lessen the impact of energy production on the environment. This was also when the search for environmentally-friendly energy sources begins.

Following the fall of the Soviet Union in the beginning of 1990s, the EU developed some initiatives for its own energy security in order to ensure its own stability. After the Cold War, the EU tried to increase security of supplies, sufficiency of production, transportation,

[39]BP Statistical Review of World Energy, 2008 and 2009.

distribution and usage of energy and find new ways for protecting the environment. In order to realize these targets, firstly, in 1991, the Energy Charter Declaration was composed and it paved the way for the 1994 Energy Charter Treaty, which "provides a multilateral framework for energy cooperation that is unique under international law." Moreover, the treaty was "designed to promote energy security through the operation of more open and competitive energy markets, while respecting the principles of sustainable development and sovereignty over energy resources." Signed in 1994, the treaty was enforced in 1998, and was signed or acceded by 51 member states plus ECSC and Euratom.

The EU gives priority to the security of supplies and transportation. Intelligent Energy for Europe 2002 was developed in order to realize these aims. The interest shown by EU for the regions that affect the European security especially focuses on two points: Energy and Stabilization. EU tried to conduct its policy towards these regions , so developed some projects in line with these purposes. With regards to European energy security, Pierre Morel, EU Special Representative for Central Asia (Caucasus) gave a speech in the Foreign Relations Commission in March 2008. Morel said that "*We, as EU, are encouraging both cooperation and competitive conditions with these countries. EU shall continue its partnership and strategic cooperation with these countries in the next stages.*"[40]For this reason, programs like TACIS 1991, TRACECA 1993, and INOGATE 1995 were established in order to make the energy transportation more secure. ***TACIS 1991*** is highlighted as a success story. The Tacis program began in 1991 and was replaced in 2007 by the "European Neighbourhood and Partnership Instrument - ENPI". The original Tacis aims were to support the process of transition to market economies and democratic societies in the countries of Eastern Europe, South Caucasus and Central Asia following the dissolution of the Soviet Union.[41]***TRACECA*** (Transport Corridor Europe-Caucasus-Asia) is the international program comprised of the EU and 14 member states of the Eastern European, Caucasian and Central Asian Region established in 1993 for technical assistance for the development of the transport corridor between Europe and Asia across the Black Sea. Its aim was to support political and economic independence of the Republics by increasing their capacity to access European and world markets.[42]***INOGATE*** is the energy technical cooperation program

[40]Pierre Morel speech.
http://www.abhaber.com/haber.php?id=21555.
[41] The European Commission's Tacis Programme 1991 – 2006 - A Success Story.
http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/enpi-east/documents/annual_programmes/tacis_success_story_final_en.pdf.
[42]What is TRACECA.

between the EU, Eastern Europe, the Caucasus and the Central Asia and it began in 1995. This initiative was followed by two Energy Conferences, one in Baku in 2004 and in Astana in 2006, which would lay out the INOGATE framework. It had four objectives: the convergence of energy markets on the basis of the EU principles, enhancing energy security, supporting sustainable energy development, and attracting investment towards energy projects of common and regional interests.[43]

Moreover, the EU created additional programs such as ALTENER II, SAVE, COOPENER, SYNERGY, and MEDA. ***ALTENER II*** began in 1998 and aimed to provide renewable energy from water and wind. It was the product of European commission as a result of the pursuit of alternative energy sources.[44]***SAVE*** was initiated in 1991 with the aim of saving energy in industry, commerce and transport. The SAVE programs are 4-year programs, with the first one held between 1991-1995, and then 1996-2000. On February 2000, SAVE program was combined with five-year Energy Environment Program (1998-2002). On April 9th, 2002, SAVE was included in the "Intelligent Energy for Europe 2002".[45]***COOPENER*** aims included the efficient use of renewable energy sources. This program was carried out 2003 to 2006. ***SYNERGY*** was a program for international energy cooperation between the EU and non-member states. It was different from other EU programs because it considered the external dimension of the EU energy policy, and emphasized regional and cross-border cooperation.[46]

More importantly, the European Commission initiated a ministerial conference on energy, hosted by the Government of the Republic of Azerbaijan in Baku on November 13th, 2004.[47] The representatives of the Caspian Littoral States, namely Azerbaijan, Iran, Kazakhstan and the Russian Federation; and the neighboring countries, namely Armenia, Georgia, Kyrgyzstan, Moldova, Turkey, Ukraine and Uzbekistan attended the conference to meet with the representatives of the European Commission and the EU member states.

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http://ec.europa.eu/europeaid/where/asia/regional-cooperation-central-asia/transport/traceca_en.htm.

[43]TheInogate Program and Georgia. http://www.inogate.org/attachments/article/46/geo_en.pdf.

[44]AvrupaKomisyonuTürkiyeTemsilciliği, "AB EnerjiPolitikası-Pazarın Açılması ve Ekonominin Desteklenmesi", İktisadi KalkınmaVakfı, 2000, s. 9.

[45] Ibid., p.10.

[46]CORDIS Archive; "Synergy, EU calls for international energy cooperation projects". http://cordis. europa.eu/synergy/home.html.

[47]Conclusins of the Ministerial Conference on Energy Cooperation between the EU, the Caspian Littoral States and their neighbouring countries. http://www.inogate.org/attachments/article/89/baku.pdf.

During the conference, the participants agreed on some mutual interests: supporting the gradual development of regional energy markets in the Caspian Littoral States and their neighboring countries; enhancing the attraction of funding for new infrastructures; embarking on energy efficiency policies and programs; and making progress towards a gradual integration between the respective energy markets and the EU market.[48] Furthermore, the importance of regional cooperation in the energy sector in order to achieve sustainable economic and social development, as well as contributing to peace, stability and prosperity in the region. They accepted to use the INOGATE Technical Secretariat as a coordination mechanism.

The target of "Baku Initiative" is to facilitate the progressive integration of the energy markets of the respective region into the EU market as well as the transportation of the extensive Caspian oil and gas resources towards Europe, be it transiting through Russia or via other routes such as Iran and Turkey.[49] Moreover, it is important for the EU to have secure and safe export routes for Caspian oil and gas due to security of energy supply. This is largely because the EU wants to increase the geographical diversification of the EU's external energy supplies. Additionally, supplying energy to the EU market at competitive international prices will be important for regulating the economic, social, and political development of countries of the Caspian region.

The Government of the Republic of Azerbaijan states that the principles and provisions of the Conclusions and the Concept Paper shall not be applied by Azerbaijan with regard to Armenia until the settlement of the conflict with the latter. The Russian participants of the Conference on "Energy Co-operation between the EU, the Caspian Littoral States and their neighboring countries," held on November 13th, 1994 in Baku, Republic of Azerbaijan, expressed some reservations towards their attitude regarding the Conclusions and attached Concept Paper, proposed for the approval at the end of the event. [50]

After the Baku Initiative in 2004, the Commission adopted a new policy which puts energy at the center of the European relations with the Caspian Sea countries in 2007. In this

[48] Ibid.
[49] Baku Initiative.
http://ec.europa.eu/dgs/energy_transport/international/regional/caspian/energy_en.htm.
[50] Statements by Participating Countries.
http://ec.europa.eu/dgs/energy_transport/international/regional/caspian/doc/final_energy_annex2_statements_en.pdf.

policy, the transportation of the Caspian energy resources became the major aim which emphasizes the importance of Turkey and the Nabucco pipeline in an overall perspective.

1.5. Energy Security for the European Union in the 21st century

The European Union is the second largest energy consumer following the USA. The Union imports more than 50% of its energy sources from energy-producing countries.[51] Therefore, it can be said that the EU is the largest energy importer of the world. With regards to this situation, the EU prioritizes energy sector issues and has tried to complete the creation of the internal energy market and ameliorate the relations with energy producers in foreign affairs. However, it is certain that the EU has some problems in the energy issue, specifically in energy policy. The energy need of the EU is increasing day by day, so there is an immediate need for comprehensive, regulated energy policies for the future of energy security.

Actually, two important events caused a dramatic change in the natural gas trade and major natural gas markets. The first event is the famous "Arab Spring" which started in Tunisia in December 2010, and caused civil unrest by pro-democracy demonstrations, revolutionary activities, and protests.[52] It created domino effect and spreaded to some other parts of the Middle East and North Africa. This unexpected event affected the global oil and gas markets. As a result of the unrest, the emergency oil stocks used by the IEA member countries for the third time in IEA's history.[53]

The second important event in 2010 was the big earthquake in Japan which caused a destructive tsunami and also damage to the Fukushima nuclear reactor. This unexpected disaster influenced mainly the global natural gas and LNG markets since all the nuclear reactors in Japan were shut down on May 5, 2012. Moreover, the huge energy deficit of Japan is being compensated by imported hydrocarbon sources, mainly natural gas in LNG form.[54]

According to Eurogas Statistics 2011, the ratio of natural gas in primary energy demand of the EU was 25 percent and demand of oil was 34 percent in 2010. It is thought that natural gas consumption will rise by 5 percent, whereas oil consumption will decrease by 5

[51]EuropeanCommission (EC), Annex to the Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy- What is at stake– Background document, COM(2006), 105 final, 2006, s. 3.
[52] Ashley Terry, "The Arab Spring", *Global News*, 2011. http://www.globalnews.ca/2011/arabspring/.
[53] OECD/IEA, *WEO 2011*, pp. 50.
[54] Ibid.

percent by 2035.[55]

An EU level policy on energy has yet to be adopted. Therefore, the European Union member states do not have a legal obligation to pursue a common energy policy and strategy. Each country will make different decisions and strategic choices. However, over the past ten years, two major policy developments related to the climate change challenge and the establishment of a single Internal Energy Market, have brought attention to the need for policy coordination and a common energy strategy in the European Union. Such a common policy will be difficult to achieve given complexity of the issues and the conflicting objectives. Whereas some progress has been made in the field of sustainability, the realization of a common energy market and of a common external energy policy in order to secure supplies has proven more difficult to achieve. Moreover, energy policymakers in Europe are faced with important decisions, which have long term consequences given the long lead times for energy investments and the long lifespan covering several decades. In considering such decisions, it is important to have a contextual and consistent view on the various aspects of the economy that will be affected. For this purpose, energy systems and policy analysis on a European scale is required.

1.6. European Energy Policy

The EU has been working on energy issue in order to challenge areas related to increasing import dependency, limited diversification, high and volatile energy prices, growing global energy demand, security risk affecting producing and transit countries, growing threats of climate change, slow progress in energy efficiency, challenges posed by the increasing share of renewable energy, and the need for increased transparency, further integration and interconnection on energy markets. [56]Therefore, some measures are to be implemented in order to achieve an integrated energy market, thus ensuring security of supply and sustainability of the energy sector. Moreover, these points are at the core of the European energy policy. Additionally, as a result of the changing geopolitics of energy supply to the EU, discussions at the EU supranational level about the necessity to define a common EU external energy become very intense now. Coby van der Linde, Director of the Clingendael International Energy Programme states that "energy supply could not just be left

[55] Eurogas, 2011.
[56]EnergyPolicy: General Principles.
http://www.europarl.europa.eu/ftu/pdf/en/FTU_4.13.1.pdf.

up to the markets as Member States were unlikely to hand responsibility for security of supply policies over to the EU given their differing foreign and security policies."[57]

As noted in the previous sections, the risks of huge reliance on the non-EU energy exporters initially became clear after the 1973 oil shock, when the members of the OPEC decided to radically rise the oil prices. Due to the oil shock, the Commission supported the precaution that "to reduce the risk of failure of certain streams of supply, sources must be sufficiently spread and none must occupy a too exclusive place."[58] However, the member states responded individually to the Commission's recommendations, so its role kept limited, since the member states did not want to give their sovereignty to a supranational authority.

After the 1990s, the Commission has mentioned the cost-effectiveness of harmonizing energy supply security policies at the supranational level instead of administering them nationally.[59] The Commission has referred the issues of "strategic oil reserve, strategic gas storage capacity, emergency sharing arrangements, and trade and aid deals with foreign producers."[60] However, the Energy Chapter was mentioned in the Maastricht Treaty of 1992, but it was still leaving the Commission dramatically constrained in terms of its scope of action. For the first time, the Constitutional Treaty which was not ratified in 2005 involved a coherent energy article (Art.III-256). Then, Lisbon Treaty in 2007 largely keeps the article in a specific chapter on energy. The EU member states and the Commission inserted certain articles about energy into the treaty as a result; the Treaty on the Functioning of the European Union (TFEU) has a separate chapter on energy (Article 194) which makes some areas of energy policy a shared competence, signaling a move towards a common energy policy. According to this Treaty, a Member State still keeps its right to "determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply"(Article 194, §2).[61] However, there are specific provisions, including[62]:

Security of supply: Article 122 creates an EU competence to adopt preventive measures

[57] European Policy Centre, "The New EU Energy Policy: Balancing the Internal Market and External Security of Supply" (Event Report, January 29, 2007).
http://www.euractiv.com/29/images/EPCenergypolicy_tcm29-161816.pdf.
[58] Keith Fisher, "A Meeting of Blood and Oil: the Balkan Factor in Western Energy Security," Journal of Southern Europe & the Balkans 4, no: 1 (2002), 77.
[59] John Surrey, "Energy Policy in the European Community: Conflicts between the Objectives of the Unified Single Market, Supply Security and a Clean Environment," The Energy Journal (1992), 27.
[60] Ibid.
[61] EnergyPolicy: General Principles.
http://www.europarl.europa.eu/ftu/pdf/en/FTU_4.13.1.pdf
[62] Ibid.

"in a spirit of solidarity between Member States (...) if severe difficulties arise in the supply of certain products, notably in the area of energy".[63]

Energy networks: Articles 170-172 establish an EU competence with regard to developing trans-European networks, inter alia in the field of energy infrastructure.

Coal: Protocol 37 explains the financial consequences resulting from the expiry of the ECSC Treaty in 2002.

Nuclear energy: The Treaty launching the European Atomic Energy Community (Euratom Treaty) serves as the legal basis for most European actions in the field of nuclear energy; in particular, Articles 40-52 (investment, joint undertakings and supplies) and 92-99 (the nuclear common market). The Euratom Treaty has been largely unchanged since it entered into force in 1958 and has kept a legal personality distinct from the EU. The EP's role in the decision-making procedures under the Euratom Treaty is limited, given that it has only been given consultation powers.

Moreover, there are some other provisions affecting energy policy, some of which include;

Internal energy market: Article 114 TFEU on harmonization measures works as a legal basis for EU legislation that has the functioning of the internal energy market as its main objective.

External energy policy: Articles 216-218 TFEU on the conclusion of international agreements are related to energy policy given that several energy projects of European interest, such as Nabucco and Desertec, have an external dimension. In most energy-related agreements, the ordinary legislative procedure applies.

Still, as noted, most of the EU member states guard their sovereignty over their energy policies, suppoting that it a sensitive decision to be taken at the national level. Stanley Hoffmann argues, self-interested states are quite obstinate in the face of European integration.[64]However, the heads of governments recently started to accept the above-discussed Commission proposals that can be considered as steps towards the eventual realization of a European-wide energy policy. The EU heads of state accepted some of Commission proposals with the expectation of outlining the groundwork for an "Energy Policy for Europe."[65]

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[63]Ibid.

[64] Stanley Hoffmann, "Obstinate or Obsolete? The Fate of the Nation-State and the Case of Western Europe", in The European Union: Readings on the Theory and Practice of European Integration,ed. Brent F. Nelsen and Alexander Stubb (USA: Lynne Reiner, 2003).

[65] Paul Belkin, "The European Union's Energy Security Challenges" (Congressional Research Service report, May 7, 2007).
http://www.fas.org/sgp/crs/row/RL33636.pdf.

1.6.1. Chapter 14 of Acquis Communitaire: Energy

The European Union is dependent on imports for half of its supplies, and it is expected to reach 70% by the year 2030.[66] For natural gas, dependence could reach 70 %; for oil 90% and for coal even 100%.[67] It is believed that enlargement could probably reinforce these trends, although certain former candidate countries are producers of primary energy, such as Poland for coal and Romania for oil and gas. As a result of this situation, the European Commission launched in 2001 a wide debate (Green Paper 'Towards a European strategy for the security of energy supply). It is argued that a more stable flow of energy, ultimately underpinning the Union's efforts to ensure peace, stability, security and prosperity is needed. This is actually because of the fact the level of import dependence depends considerably on member states. Additionally, natural gas is not available to all consumers in the European market in an easy way due to the geographical pattern of pipelines and distribution systems. With the enlargement process, this trend will be likely to increase as a result of new members coming. These considerations have triggered the member states to take a number of actions towards cooperation for the issue of energy. Moreover, The Commission states more on energy and potential members in its recent meeting and publications such as Enlargement Strategy and Main Challenges 2012-2013.

Turning to the energy acquis, it embodies the body of all energy related EU law, regulations and policies. In order to implement the acquis, there is a need for adequate legislation and functioning institutions. For instance, a regulatory body is required in the electricity, gas directives, and a nuclear safety authority.

According to the energy acquis, candidate countries are required to[68];

- decide on an overall energy policy with clear timetables for restructuring the sector;
- prepare for the internal energy market (the Gas and Electricity directives; Cross border exchanges in electricity; the Directive on electricity produced from renewable energy sources)
- improve energy networks in order to create a real European market
- prepare for crisis situations, particularly through the constitution of 90 days of oil stocks

[66] Chapter 14. http://ec.europa.eu/enlargement/archives/enlargement_process/future_prospects/negotiations/eu10_bulgaria_romania/chapters/chap_14_en.htm.
[67] Ibid.
[68] Chapter 14. http://ec.europa.eu/enlargement/archives/enlargement_process/future_prospects/negotiations/eu10_bulgaria_romania/chapters/chap_14_en.htm.

- address the social, regional and environmental consequences of the restructuring of mines
- waste less energy and increase the use of renewable energies such as wind, hydro, solar and biomass in their energy balance
- ensure the safety of nuclear power plants in order that electricity is produced according to a high level of nuclear safety
- ensure that nuclear waste is handled in a responsible manner; and prepare for the implementation of Euratom Safeguards on nuclear materials.

Energy policy directly affects every member state in the EU. According to the European Commission, the issues and challenges related to energy require action at European level; no single national government can deal with the issue successfully alone. Therefore, European Union Member States and European industry can develop energy sectors which best meet the needs of citizens and our economy, but also minimising damage to our environment. The European Commission's Directorate-General for Energy manages work in this area, also considering the enlargement process and regional cooperations. For instance, thinking the five countries of the Maghreb and their efforts towards closer cooperation and deeper regional integration, Commissioner for Energy Günther Oettinger said: "*Energy plays an important role in the development of the region. With our Mediterranean Solar Plan we are aiming to help our partners*,"[69]. From the statement, it can be referred that energy has kept its primary role in the EU's agenda in all areas.

1.6.2. Securing Supplies

According to the Commission, the EU imports about 50% of its overall energy needs.[70]Its import dependency is expected to grow through 2030, from 80 to 93%t in the case of oil, and from 57 to 84% in the case of gas. Russia accounts for 27% of the EU's total oil consumption and 30% of its oil imports.[71] Similarly, Russia makes up for some 24% of EU total gas consumption and 44% of its gas imports. Most significantly, Europe's import of Russian gas is expected to double in the next 25 years. One way of securing Europe's energy supplies is by reducing its import dependency through internal measures, such as adapting the energy mix towards alternative and renewable sources, increasing energy efficiency, and

[69] The EU's Support for Integration of Maghreb Countries. http://ec.europa.eu/commission_2010-2014/fule/headlines/news/2012/12/20121219_en.htm.
[70] The EU and Energy. http://www.eurunion.org/News/eunewsletters/EUFocus/2006/EUFocus-Energy.pdf
[71]From Ideas To Action: Clean Energy Solutions For Asia To Address Climate Change, USAID/ASIA, Section 3.

reducing consumption. However, given that the share of oil and gas in the EU's total energy consumption mix will far outgrow its domestic production and demand in the foreseeable future, it is imperative for the EU to forge an effective external energy policy. It is with regard to this international dimension of energy security that the EU has made the least progress. The inability of EU leaders to speak with one voice to third parties and the Commission's recent conclusion of several agreements with producing states, results in EU member states continuing to give precedence to their own external energy policies and hence, they seek to secure energy supplies through bilateral deals. The two key challenges with regard to the EU's external energy policy concern its relations with Russia and the diversification of its energy imports by exploiting global supply markets.

Table 1.3: Imports of Natural Gas and Oil for EU-27

	2005	**2020**	**2030**
Oil	82%	90%	93%
Natural Gas	57%	70%	84%

Source: European Commission Green Paper on "Energy Policy for Europe", Brussels, 2007

1.6.3. Protection of Environment

Protection of the environment holds an important place in the EU energy policy, since 95% of carbon emissions are based on fossil fuel usage in the EU. The EU targets the decrease of these emissions not only to protect the environment but also to prevent climate change. In this respect, the EU has specified some target goals: increase energy efficiency, increase usage of renewable energy sources in primary consumption, develop clean energy technologies, and use fuel oil that burns less CO2.[72]

All these efforts are needed in order to meet the goals set forth in the Kyoto Protocol. According to the Kyoto protocol, the European Union should decrease greenhouse gas emissions by 8% between 2008 and 2012. After Kyoto (and by 2020), the EU should increase energy efficiency by 20%, increase renewable sources by 20%, and decrease the CO2 emission by 20%.

The EU has enough coal reserves however, and hence, it prefers natural gas in order to decrease carbon emissions. Therefore, the union's need for natural gas increases daily. It

[72]Yorkan, Arzu, EnergyPolicy of the European Union and ItsEffects on Turkey, Bilge Strateji, Cilt 1, Sayı 1, Güz 2009.

means that dependency on outside sources will increase too. It follows that the target of protecting the environment is affected by these developments.

For the issue of energy saving, the EU gives importance on cogeneration technology. This technology responds the 15% of EU's electricity demand and this rate will increase in the following years. Moreover, nuclear energy cannot be used due to political reasons; so electricity energy will gain more importance. Last but not least, the protection of environment also requires decrease in tanker traffic in the sea. Therefore, pipelines will become vital.

1.7. EU Dependence on Russia

Given its wealth of natural resources, Russia is bound to remain a key energy partner for the EU. However, the gas row between Russia and Ukraine in the winter of 2006, which resulted in a temporary cut off of supply to Europe, generated heightened concern within Europe regarding their perceived dependency on Russia.[73] In fact, EU-Russian energy relations are marked by a high degree of interdependence. While Russia's Gazprom supplies gas to over 20 European countries, Russia is highly dependent on the EU energy market. Over 60% of Russia's gas and oil exports flow to Europe, providing 60% of Russia's cash earnings. Moreover, Russia is heavily dependent on Western technology to extract reserves for future production. Despite this factual interdependence, no stable and dynamic EU-Russian energy relationship has emerged.

One issue concerns fair, transparent, and reciprocal access to energy resources, transport infrastructure, and markets. As Russian national energy companies increasingly control supply chains of extraction, production, transportation, and sales to Europe, Europeans question the extent to which Russian companies should be allowed to operate in their markets. In response, the EU is insisting on equal access for European companies in Russia's market. However, Russia is unlikely to liberalize its internal market, particularly the transport sector, and instead insists on EU guarantees for long-term supply contracts. As Russia has never ratified the 1994 Energy Charter Treaty (ECT) and Transit Protocol that would provide a regulatory framework for EU-Russian energy relations, business is

[73]The natural gas dispute between Russia and Ukraine started in March 2005 as a result of the RussianGaz supplier company Gazprom's demand for an increase in the natural gas prices for the gas it providesto the Ukraine. Gazprom wanted toincrease the price from $50 to $230 per 1,000 cubic metres. Thecontinued rejection of Ukraine to pay this price resulted in Russia's cutting of natural gas to Ukraine onJanuary 1, 2006. It was important for the EU also, as 80% of EU natural gas from Russia pass through Ukraine. The crisis was resolved on January 4, 2006. Under the deal, Ukraine buys gas from a Swissregisteredcompany that is half-owned by Gazprom, called Rosukrenergo. Rosukrenergo buys gas from Gazprom at $230 per 1,000 cubic metres, and from Turkmenistan for much less. For further info:http://news.bbc.co.uk/2/hi/business/4569846.stm.

conducted on a case-by-case basis. With Russia continuing to affirm that it still intend to follow the key principles of the ECT, the EU should work to include them in a new bilateral partnership and cooperation agreement, in particular regulatory and dispute settlement mechanisms.

As the EU is determined to strengthen the producer-transit-consumer chain in a common regulatory space, shaping such a space with Russia would mark a success that is likely to influence EU energy relations with other countries. European cohesion is a precondition for the EU to enter into these negotiations from a position of strength. However, beyond the recent mandate approved by the EU Council of Ministers to negotiate with Russia, the positions of member states differ. This is partly the result of their varying degrees of gas import dependency on Russia, which ranges from 100% in the case of Bulgaria, Finland, Estonia, and Romania to 0% in the case of the UK, the Netherlands, Portugal, and Spain. It is also related to the objectives of some European state-owned companies to invest in Russia. Moscow is thus able to employ different rules when dealing with different states and has forged partnerships with some EU members to the detriment of others. The desire to enhance cooperation in the energy sector is understandable when the dependence of the EU on Russian energy and Russia's dependence on the revenues from the EU is taken into account.[74]

1.7.1 Diversifying Suppliers and Transportation Routes

Diversification is a key concern of EU energy security, because Russia is unable to meet Europe's growing energy demand and it reduces the risk of serious and negative economic consequences in the case of interruption of energy flow. Moreover, the main focus of the European Union's diversification efforts is about gas. The challenge is not just to find reliable producers, but also to build new transportation routes, find energy at affordable prices and continue sustainability. Unlike oil, gas is difficult to store and is mainly transported with pipelines, which means that gas supply systems are regional rather than global. Most importantly governments make long term agreements or follow the take-or-pay system. There is no common gas market contrary to oil. Nowadays, Europe's gas

[74]"Russian energy exports account, in value, for some 45% of exports to the EU. 50% of Russian oil exports (crude and products) of 218 million tonnes of oil equivalent (toe) were to the EU in 2001. This represented 20% of the EU's oil imports and 17% of total EU oil consumption. Some 63% (130 billion cubic metres (Bcm)) of Russia's natural gas exports of 205 Bcm were delivered to European countries in the year 2000, with contractual requirements to increase deliveries to around 200 Bcm by the year 2008. Approximately 56% (73 Bcm) of the natural gas exported to Europe in 2000 was delivered to the EU.", for further info: http://ec.europa.eu/energy/russia/overview/why_en.htm.

transportation infrastructure belongs to Russia, Algeria, and Norway. Until liquefied natural gas (LNG) processing and terminals for tanker transportation are more fully developed, the EU will have to build new pipelines if it seeks to diversify its gas supplies.

The main focus with regard to energy diversification has been on intensifying relations with countries of the Caspian Region, for instance, Azerbaijan, Kazakhstan, Turkmenistan, and Iran. This region has the two advantages of holding large reserves of undeveloped gas and oil and of being situated geographically close to Russia, allowing for direct transportation lines to Europe. The major EU-supported Nabucco pipeline is projected to transport Caspian gas through Turkey and across Bulgaria, Romania, and Hungary into Austria. The Turkey-Greece-Italy (TGI) pipeline and the Trans-Adriatic Pipeline (TAP), run by Swiss EGL and Norway's StatoilHydro, is also designed to carry Caspian gas into the heart of Europe.[75]

1.7.2. Nabucco and South Stream

The high import dependence of the European Union for natural gas has already been mentioned in the previous sections. As noted, the increased dependence makes the importing countries very vulnerable to gas interruptions. For instance, 80 percent of the Gazprom exports were entering the EU via Ukraine before the opening of the Nord Stream Pipeline. Then, the gas crises of 2006 and 2009 crush the EU countries like a natural disaster. Beside that, in 2010 and 2011 the dispute between Russia and Belarus over different issues, including the issue of the energy prices, affected the EU and neighbouring countries too.

In order to prevent situations like these ones, direct pipelines from Russia to the EU are began to be planned. The South Stream Pipeline project proposed by Moscow are one of those pipelines. This pipeline is supposed to run under the Black Sea, reaching firstly to the Bulgarian and Hungarian markets. Due to this project, tensions were raised, because Russia should have get Turkey's permission since it will also cross its Exclusive Economic Zone (EEC). However, the EU and Turkey have other plans for the Southern Gas Corridor project. Then, the South Stream project was not backed by the EU and the Turkey. After all, Turkey granted permission to build the South Stream pipeline that connects to the same markets as the Southern Gas Corridor will do.[76] The construction was supposed to start in 2012 and the project was said to become operational in 2015, however so far no initiatives has been done.

[75] Ariel Cohen, Europe's Strategic Dependence on Russian Energy, November 2005

[76] Eric Watkins, "Russia to build south Stream gas pipeline via Turkey", *Oil and Gas Journal*,, Los Angeles, 30 Dec 2011.

Similarly, the Nabucco project is a new gas pipeline connecting the Caspian region, Middle East and Egypt via Turkey, Bulgaria, Romania, and Hungary with Austria and further on with the Central and Western European gas markets. In respect of its lenght (3,300 km), it would carry a reasonable amount of the gas volumes. [77] Although there are negative expectations about the Nabucco project due to TANAP as a direct competition project to the Nabucco, Turkey's energy and natural resources minister, Taner Yıldız said on 18 May 2012 that it would not be appropriate to say the Nabucco project is over.[78]

Russia has been very effective in competing with these European projects by supporting its own pipeline projects. Blue Stream is a trans-Black Sea pipeline constructed by Gazprom and Italy's ENI to carry gas from Russia to Turkey.[79] The same two companies are now pursuing the South Stream pipeline project that would carry gas from the Russian coast of the Black Sea to Romania, Bulgaria, and Greece and from there on a south-western route into southern Italy and on a north-western route into Serbia and Hungary, continuing on to Austria or northern Italy. Although South Stream is considered by many experts not to be commercially viable, it serves as a counter to Nabucco and renders the European project less competitive. Bulgaria, Greece, Hungary, and Serbia have already signed cooperative agreements with Russia. Hungary, in particular, hopes to become a new hub for Russian gas to Europe. Because this would undermine Austria's role as a hub for Nabucco gas, Vienna is now contemplating the idea of integrating Nabucco with South Stream and filling the pipeline with Russian gas. Similarly, Greece is proposing to fill the Turkey- Greece- Italy (TGI) pipeline with gas from Russia.

European gas diversification efforts face several additional challenges. The EU must compete for Caspian gas with the Russian, Chinese, and other Asian markets. Moreover, the border link of the Caspian seabed among the littoral states remains an unresolved issue, which could negatively affect transportation. Furthermore, while Iran's massive gas reserves make it a potentially important supplier for the EU, in particular for the Nabucco pipeline, this largely depends on a resolution of the question of its nuclear program. Some experts predict that the real growth areas for European gas supplies are in North Africa and the Middle East. If the EU seeks to create a comprehensive gas supply system that is as

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http://www.ogj.com/articles/2011/12/russia-to-build-south-stream-gas-pipeline-via-turkey.html.

[77] The project Nabucco.
http://www.nabucco-pipeline.com/portal/page/portal/en/Home/the_project.

[78] Nabucco is not dead, Azeri deal close: Yıldız, Turkish Daily News.
http://www.hurriyetdailynews.com/nabucco-is-not-dead-azeri-deal-close-yildiz.aspx?pageID=238&nid=21123.

[79] Ali Tekin, Paul A. Williams, Europe's External Energy Policy and Turkey's Accession Process, Center for European Studies Working Paper Series #170 (2009).

interdependent as possible, it will have to intensify its relations with these regions, despite the difficulties of doing business with many of the producer countries. The more Europe relies on external gas supplies, the more need there will be for regulatory, legal, and dispute settlement mechanisms. The EU will want to ensure that the environmental impact of producing states is limited by an expanded Kyoto Protocol. Moreover, strengthening the work of multilateral organizations, such as the International Energy Agency and the World Trade Organization, can help regulate competition for limited routes and supplies. The EU should continue to improve conditions for private investment in producer countries in cooperation with the US and the World Bank. At the same time, the EU will want to ensure that its demand does not undermine European Neighbourhood Policy objectives of economic liberalization by making states dependent on payments for hydrocarbons.

The EU energy strategy of March 2007 is an important milestone towards a common energy policy. However, the challenges remain compelling. It will be difficult to create a fully integrated internal market as long as external supply sources are concentrated in Russia. It will be equally difficult to diversify supplies as long as vertically integrated energy companies resist ceding a share of their domestic markets and their privileged relationships with individual producers. Finally, until Europe strengthens its own internal energy market, it will be difficult to encourage its suppliers, such as Russia and Algeria, to do the same. The three pillars of the EU energy strategy – competitiveness, security of supply, and sustainability of energy – are interlinked. Therefore, it is essential that the Europeans define priorities and develop an integrated framework. This will require the EU members to intensify their debate on how to translate policy statements into concrete actions in each of the pillars. In the near term, a comprehensive strategic EU approach towards energy security is unlikely to emerge. Given rising energy prices, growing demand, and unpredictable suppliers and routes, this lapse could impact negatively on the economies of European member states.

1.8. Conclusion

Although energy is very critical issue the world over, the EU does not yet seem to fully agree on a common energy policy or strategy. Due to lack of harmonized and common energy policy, the EU has security problems in the area of energy. If it succeeds in creating a common energy policy, its role in the global arena increases more effectively. In order to solve this problem, the Commission foresees having to take some steps. Firstly, the infrastructure for oil and natural gas pipelines is needed, the energy systems should be harmonized, and it should become complementary. Secondly, there is a need to enhance the

relations with energy producing countries and countries located between energy transfer points. In particular, relations with Russia are emphasized more. Moreover, the other supplier countries are mentioned but the concentration is on the point that the relations should be carried under the Common energy policy determined by the EU. [80]

In short, although creation of a common energy policy is a problem for the union, the Commission gives importance on the energy issue, and this emphasis is increasing with reports and papers. Lack of energy policy creates weaknesses in the international arena, because the enforcements of the EU can become ineffective. This is also as a result of the fact that the decision making mechanism is at the hand of the nation states. Certainly, the EU intervenes with regards to energy policies with financial and executive implementations; but these are limited interventions. The most important examples of this are regulations aimed at making energy consumption efficient.[81]In this sense, it is important for the EU to provide incentives for improved relations with energy producing and transit countries through investments, in order to procure energy security. The next chapter addresses the role of member states and their preferences in the formulation of an EU energy security policy.

[80]Ibid, p.16.
[81]Green paper, 2005, p.12-13.

CHAPTER 2- PREFERENCES OF MEMBER STATES ON ENERGY ISSUES

The previous chapter analyzed the evolution of the energy policy in the European Union with the main conclusion that the EU still does not have an overarching policy for energy security. This brings us into the theoretical framework to understand the emergence of EU level policies. This chapter focuses on the member states' preferences, in line with the theory of rational intergovernmentalism, and assesses the diverging preferences of the member states as the key to understand the lack of an EU level energy policy. It is not possible for all member states to perceive energy security as a vital issue. For that reason, it can be argued that energy security is critical for some member states whereas it is not as important for others. Therefore, there is a divergence between the EU member states over what they see as critically important in energy security. In order to further explore this point, this chapter will delve into the intergovernmental school within the EU framework first, and then, investigates the member states preferences on energy security, specifically the "Big Three": Germany, France, and the UK.

2.1. Intergovernmentalism at the EU Level

According to Nugent (2006), intergovernmentalism could be seen as "arrangements whereby nation states, in situations and conditions they can control, cooperate with one another on matters of common interest. The existence of control, which allows all participating states to decide the extent and nature of this cooperation means that national sovereignty is not directly undermined."[82]Intergovernmentalists focus on state actors and the dominant concept of national sovereignty and security in interstate relations.[83] Intergovernmentalism as a theoretical framework offers the logic of diversity, which 'set limits to the degree which the spillover process can limit the freedom of action of the governments. The implications of the logic of diversity are that on vital issues of common interest, losses are not compensated by gains on other issues'.[84] Moravcsik's liberal intergovernmentalism involves three critical elements which combine the following: a liberal theory of national preference formation; an intergovernmental analysis of interstate

[82]Nugent, N.(2006).The Government and Politics of the European Union. 6th Edition. Palgrave Macmillan. http://books.google.ie/books?q=Neil+Nugent%27s+Government+and+politics+of+European+Union&lr=&sa=N&start=10.
[83]West, S (2004). Liberal Intergovernmentalism. http://www.nyegaards.com/yansafiles/liberal%20Intergovernmentalism.ppt.
[84]Hoffmann, A. (1966). 'Obstinate or obsolete? The Fate of the Nation State and the case of Western Europe'. Daedalus. Vol 95/3: pp862.

negotiation and the assumption of rational state behavior.[85]In order to understand the theoretical framework for European Union Integration, different theorists began political debates over EU policy making in terms of autonomy and authority.[86] Theorists who support intergovernmentalism consider key actors to be nation states and their corresponding governments, while supranationalist supporters argue that it is supranational organizations and their institutions who represent it.

Intergovernmentalism mention the limitations of supranationalism exemplified by the Luxemburg compromise in 1965, when then French Ministers boycotted Council meetings in a process later known as the "empty chair" policy, and the failure of the paradigm to take into account the role of strong and influential National leaders and the resilience of the Nation State.[87] The intergovernmentalists argue that Federalism could be characterized by skepticism as there was differential acceptance of the objectives of a federal Europe by member states of the European Union. The intergovernmentalists argue that neofunctionalism is limited since it assumes that integration in low politics, such as economics, will lead to integration in areas of high politics, such as sovereignty. Instead, it posits that this would not be possible since the issues of high politics are integral to the national interest hence integration would only be possible when national interests coincide, though unlikely.[88]

Moreover, Hoffmann states that proponents of intergovernmentalism proposed that states were uniquely powerful for two reasons: because they possessed legal sovereignty; and they had political legitimacy as the only democratically elected stakeholders in the integration process. Therefore, unlike what Hoffmann thought, governments had much more autonomy than in the view of neofunctionalists.[89] Different scholars like Milward (2000) had argued that it was the EU national governments who have played a great role in the historical antecedents of the EU which have reinforced and enhanced its integration.[90]

It is also known that the policies of the European Union have been positively reinforcing and re-asserting the theories of intergovernmentalism with regards to neither

[85]Moravcsik, A (1993). Preferences and Power in the European Community: A Liberal Intergovernmentalist Approach. Journal of Common Market Studies. Vol. 31. No. 4.p476.
[86]Rosamond, B (2000). Theories of European Integration. New York: Palgrave. Basingstoke. London.p.81.
[87]Wallace, W., & Wallace, H (2005).Policy-Making in European Union. 5th Edition. Oxford University Press. Oxford.
[88]Nolan, P (2006). Managing in Europe. Lecture Note, Postgraduate Programme. Institute of Public Administration. Dublin.
http://eupolicyprojects.blogspot.com/2009/05/eu-integation-intergovernmentalism.html.
[89]Wang, R (2007).The Fate of the European Union. Global Politics.
http://www.global-politics.co.uk/issue2/archive.htm.
[90]Milward, A.S (2000). The European Rescue of the Nation-State (1992, revised edition 2000).

compromising nor diminishing the values of national sovereignty of member states. Intergovernmentalism supports that European integration is driven by the interest and actions of the European Nation States. According to this interpretation, the main aim of governments is to protect their geopolitical interests such as national security, defense, and national sovereignty.[91]

This is why this thesis uses the intergovernmentalism framework as the main framework to assess the EU's energy policy. To understand the differences between the national preferences of the member states, Germany, France and the UK's preferences will be explained, as they are the Big Three and the relatively more powerful members shaping EU policies. This chapter also analyses the preferences of the Central and Eastern European states on energy policies as well because they seem to have the highest degree of dependence on imported sources of energy.

2.2. Energy Policies of the Three Locomotives of Europe

When European energy security is examined, only looking at the EU's energy policies is not enough to understand the issue. For that reason, states like France, Germany, and the UK which act as the locomotive of the EU, should be studied. France and Germany are two countries which have the largest role in the creation of the union. When economic and political power is concerned, the UK and Italy should also be looked at beside Germany and France.

To begin with France, it pushes for a European Energy Policy (EPP).[92]France's energy profile is mixed, because it exports large amounts of electricity to neighboring countries and also to Spain and Italy. Moreover, it relies mainly on nuclear energy. İts import are oil and gas from both European and external energy providers. Looking at its oil imports, they come from a number of suppliers, basically the Middle East and North Africa (51%), North Sea (32%) and Russia (only 23%).[93] France has also diversified its gas imports which come from Russia (22%), Algeria (16%), Norway (35%) and the Netherlands (21%). Nuclear

[91]West, S (2004). Liberal Intergovernmentalism. http://www.nyegaards.com/yansafiles/liberal%20Intergovernmentalism.ppt.
[92] Oliver Geden, Clémence Marcelis, and Maurer Andreas, "Perspectives for the European Union's External Energy Policy: Discourse, Ideas and Interests in Germany, the UK, Poland and France" (working paper, FG 1, SWP Berlin, December 17, 2006), 4. http://www.swp-berlin.org/common/get_document.php?asset_id=3521.
[93] Source: International Energy Agency (IEA).

energy is a key source for France's consumption as it accounts for 41% of its total energy supply.[94]

Secondly, Germany depends mostly on Russia for energy resources as one third of its oil and 35% of its gas. It continues to invest in coal-based electricity generation to decrease its imported energy consumption.[95] Moreover, around 12% of Germany's total energy consumption is supplied by nuclear energy generation within the country.[96] However, there is recently a very controversial discussion within the country about withdrawing from the nuclear industry in the long run because of environmental concerns. The concern is that if Germany totally gives up nuclear energy, it will become more dependent on energy imports. Moreover, the special partnership between Germany and Russia regarding energy trade shows the tendency to further develop its independent long-term contracts with Russia.[97]

Finally, The UK has been a self-sufficient country regarding energy and also it is a net exporter of oil. Additionally, the UK exports gas to other EU member states. The problem for the UK is the sustainability of its production, because its oil resources are about to become exhausted. Its indigenous gas resources are similarly running out so the UK is forced to start importing natural gas.[98] Hence, despite a set of pipeline projects, the UK wants to increase its access to gas fields in Norway and continental Europe. These considerations have created the idea that the continuation of the current energy policy would threaten the UK's energy security and force it to change its stance toward a common EU-wide external energy policy.

Three locomotives of Europe will be observed in detailed in next sections in order to see their current situation and stance in the energy issue.

2.2.1. Germany

Today, Germany is the largest economy of Europe and the fifth largest economy in the world. The country that is like the locomotive of the EU, gives priority on energy issues. How to provide energy is the first concern of Germany today. For that reason, Germans invest more on renewable energy sources and nurture their relations with countries who produce hydro-carbon energy sources. According to International Energy Agency, the total

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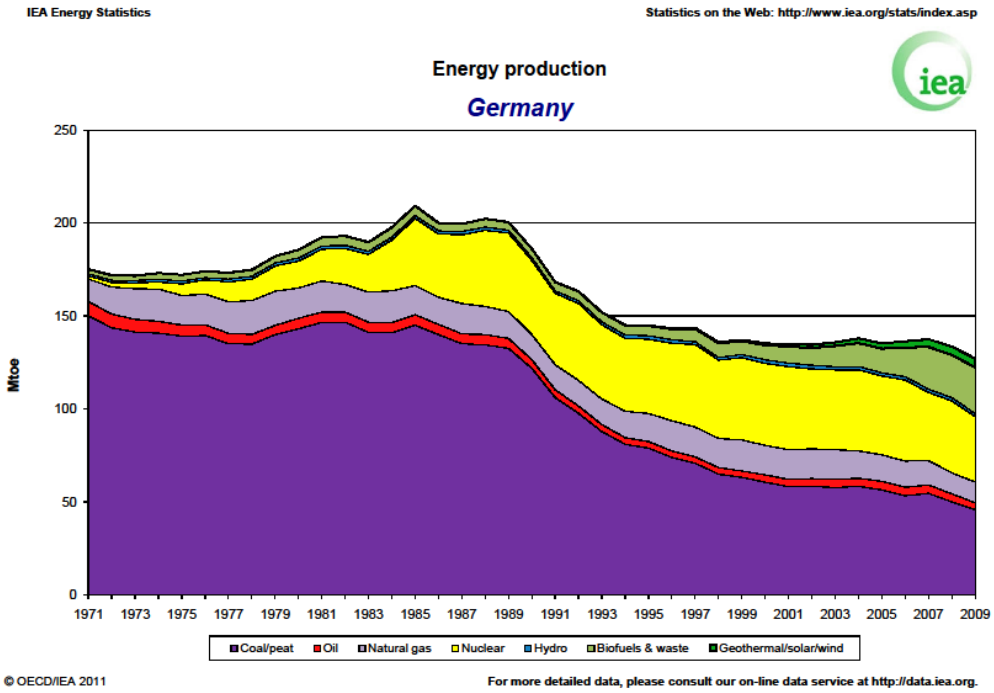
[94] Ibid.
[95] Oliver Geden et al., 7.
[96] Ibid.
[97] Oliver Geden, Clémence Marcelis, and Maurer Andreas, "Perspectives for the European Union's External Energy Policy: Discourse, Ideas and Interests in Germany, the UK, Poland and France" (working paper, FG 1, SWP Berlin, December 17, 2006).
http://www.swp-berlin.org/common/get_document.php?asset_id=3521.
[98] Ibid.

energy need of Germany is 350 million equivalent values to oil. One third of this need is oil, and natural gas and coal are nearly 22-23% in total.[99] The storage capacity is also very important for the energy security. In 2006 the number of storage facilities of the EU was 127, with a maximum working volume of 75 bcm, on the other hand, in 2009 the EU reached 79 bcm capacity with 130 storage facilities. Coming to 2010, 6 storage facilities were closed such as one in Germany.[100]

Additionally, industrial producers in Germany, the major players in the German energy industry should be mentioned, since they are developing some strategies. In order to help replacing nuclear power, they are racing to install huge wind farms far off the German coast in the North Sea; also, new transmission infrastructure is now being planned to get the power to Germany's industrial regions. Moreover, companies like Siemens, GE, and RWE are searching for ways to remain factories humming during lulls in wind and solar power.[101]

Figure 2.1: Energy Production of Germany, 2009



[99] IEA, Country Codes.
http://www.iea.org/stats/indicators.asp?COUNTRY_CODE=DE.
[100] Eurogas, 2011.
[101] The Great German Energy Experiment, David Talbot on June 18, 2012.
http://www.technologyreview.com/featuredstory/428145/the-great-german-energy-experiment/.

Germany provides 65% of its coal needs from its own resources whereas for natural gas and oil, it is dependent on outside sources (for oil: 100%; for natural gas: 80% dependency rate).[102] A high dependency rate like this makes diversification of resources hard. Therefore, neighbors like Norway and Russia as energy-producing countries become the most important suppliers of Germany. Germany imports 40% of its natural gas and oil from Russia and nearly 30% of natural gas and oil from Norway. [103] For example, Germany has its own direct pipeline connection from Russia, the Nord Stream, with a capacity of 27.5 bcm of natural gas flowing since November 2011. The second connection from Russia to Germany, Nord Stream II, is being build which is thought to become operational at the end of 2012 with the same capacity of 27.5 bcm of natural gas.[104]

Looking at these facts, Germany also has energy security concerns, not unlike the European Union. According to the Federal Economy and Technology Ministry, Germany has set forth the following goals: energy sufficiency, securing supplies, and environmental harmony for the energy policy. [105]German energy bureaucracy prioritizes the securing of supplies, because of the potential competition between the USA, the EU, and Asia on the supplies of Russia, Caspian area and the Middle East. For that reason, the German government wants to make investment in those supplier countries and, conversely, wants them to make investments in Germany. This is particularly true for Russia. After 2006, tension due to gas between Russia and Ukraine grew, and Germany tried to strengthen its relations with Russia and started the North Stream line. [106]German Chancellor Angela Merkel also stated that the Nord Stream gas pipeline had found, "solutions that give Poland major security." At this point, Germany and Poland have had on-going disagreements relating to Nord Stream, as Poland has set off on plans to attempt to increase its energy security. However, as was stated, Germany does not want to deteriorate the relation with Russia, especially on the energy issue.

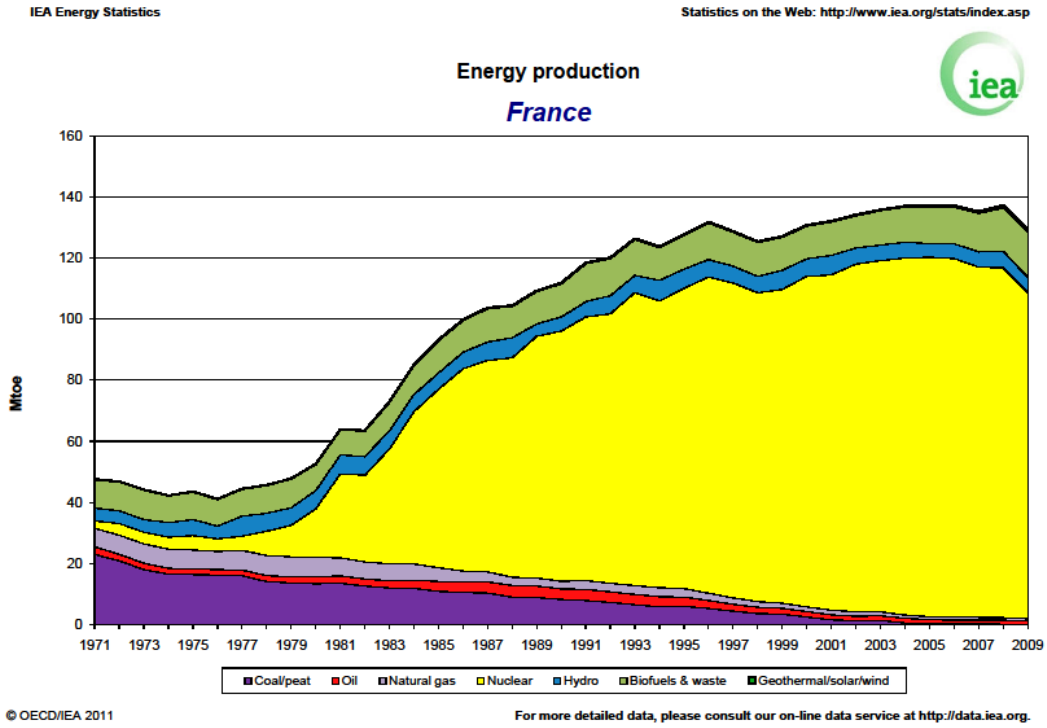
2.2.2. France

France is in the same situation as Germany with regards to energy issues; it is dependent on outside sources too. It is the second country in the EU that needs the most energy, after Germany. Its energy need is equal to 272 million tons of oil. However, France

[102]IEA, 2011a.
[103]Harks, 2004, p.4
[104] Nord Stream, Website, "The Pipeline". http://www.nord-stream.com/pipeline/.
[105]BMWi, 2011.
[106]Liembach, Müller, 2008, p.24.

differentiates itself from Germany because it has nuclear energy is able to decreases its energy dependency on outside countries. It is the second nuclear energy-producing country after the USA, and its natural gas need is no more that 15% of its energy needs. France satisfies 40% of this need through Norway and it also imports gas from Russia and Holland. Moreover, France diversifies its supplier sources and takes liquid natural gas (LNG) from Algeria, Nigeria, and Egypt. Beside natural gas, it also imports oil from Saudi Arabia, Norway, Iran, Iraq, Nigeria, and Russia. Therefore, it can be said that France has succeeded in diversifying its energy sources.

Figure 2.2: Energy Production of France, 2009



France emphasizes its source diversification and it uses electricity for industrial use from nuclear energy, so its situation in the case of an energy crisis will be better and less fragile than Germany. This situation brings France a more secure position about energy interests compared with Germany and Italy. It is known that investments on nuclear energy should be lessened according to the EU norms. [107]However, it is unlikely that France will leave its nuclear energy advantage. The French Minister in charge of Industry, Energy and Digital Economy, Eric Besson, stated that French historical choices in favor of nuclear energy has led to an important reduction of the oil import bill and has increased the country's

[107]European Energy Review 2010.

independence, and the share of oil in French final consumption went down from around 65 to 45% between 1973 and today.

As noted, nuclear energy is a crucial source for France's consumption that accounts for 41% of its total energy supply.[108] Since the first oil shock in 1973, France continues to its nuclear capability to be able to respond to possible future cuts from energy exporters. This is the point where France differentiates itself from other EU member countries. As a result of challenges like Russian gas supply distruptions to transit countries and so to the European markets, different French governments refuse to close the existing nuclear stations in France and want to preserve advances in nuclear power. A popular French riposte to the question of why they have so much nuclear energy should be mentioned here: "No oil, no gas, no coal, no choice."[109]

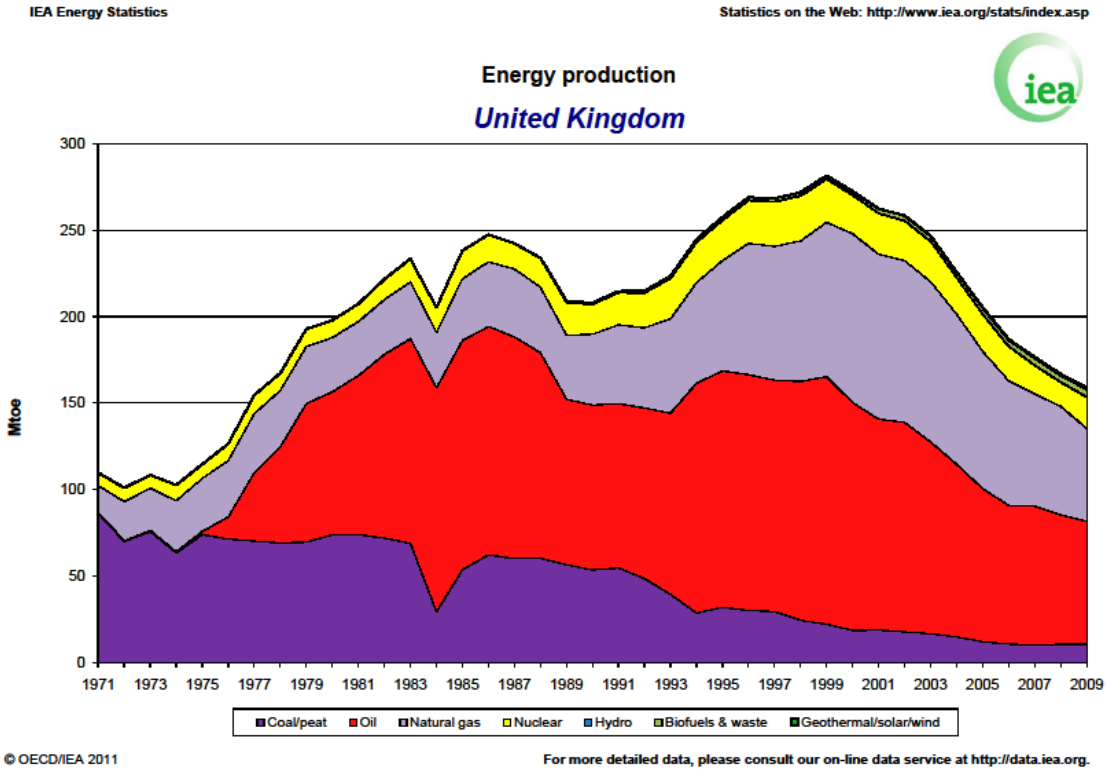
Additionally, France wanted to do business with Libya in areas including nuclear energy. French Industry Minister Christian Estrosi signed an agreement in 2010 with his Libyan counterpart on trade cooperation, and also had talks with Libyan Prime Minister Al-Baghdadi Ali al-Mahmoudi. "This agreement will lead to strategic cooperation with Libya in the areas of transport, health, construction, oil and gas and peaceful nuclear energy," he has said.[110] However, as it is mentioned in the previous sections, there was a civil movement in Libya, as a result of "Arab Spring." The production in Libya is about to increase after the regime changes. Libya's infrastructure is able to supply a maximum volume of 12.5 bcm/y to the EU countries.[111] Therefore, new projects and developments are absolutely required to meet the 40 bcm target of Libya by 2030.[112] Especially, after the civil unrest in 2011, Libya is now at the recovering stage. If the production of Libyan gas keeps stable, the volumes for exports are likely to continue at the current level. With regards to these predictions, these are all advantage for France.

[108] Ibid.
[109] Why the French like nuclear energy? Frontline Producer, Jon Palfreman. http://www.pbs.org/wgbh/pages/frontline/shows/reaction/readings/french.html.
[110] French seeking nuclear energy deals with Libya,. http://af.reuters.com/article/topNews/idAFJOE69L02H20101022.
[111] Mott MacDonald (MMD), "Supplying the EU natural gas market", November 2010. http://ec.europa.eu/energy/international/studies/doc/2010_11_supplying_eu_gas_market.pdf.
[112] U.S. Energy Information Administration (EIA), "Libya", June 2012. http://205.254.135.7/countries/cab.cfm?fips=LY.

2.2.3. The United Kingdom

The UK is different from France and Germany because it has been self-sufficient for their energy needs for a long time. Its need for energy is equal to 230 million tons of oil, which correspond to 2,5% of the world's energy consumption. In the past, The UK has been more self-sufficient country in terms of energy. The UK exports gas to other EU member states and moreover, some UK governments have supported the nuclear energy. Still, there is a problem for the UK which is the sustainability of its production. It means that its oil resources are rapidly becoming exhausted. Additionally, its indigenous gas resources are running out, so the UK is forced to begin importing natural gas. It has a set of pipeline projects to increase its access to gas fields in Norway and continental Europe.

Figure 2.3: Energy Production of the UK, 2009



Unfortunately, the resources of the country in the North Sea are decreasing dramatically.[113] Energy diversification breakdown of the UK is the following: Oil (38%),

[113]UK Gas Reserves and Estimated Ultimate Recovery, 2009.

natural gas (35%), coal (18%), and nuclear energy (8%).[114] Although the UK has seemed to be successful in diversifying its energy resources, decreasing resources cannot meet increasing consumption. For that reason, the UK has collaborated with Norway for natural gas and it has also linked to European gas networks through Belgium.[115] It also imports liquid gas from Algeria and Qatar by LNG terminals.

The energy security of the UK is emphasized in A White Paper on Energy (2007). The government policies mostly related to decreasing carbon emission through disposition of energy and securing cheaper and clean energy supplies. Considering these two points, the UK is different from other member states in the EU on the energy issue, since its movements are more efficient that other members as a result of its relations with transatlantic countries. These considerations have brought to the understanding that the continuation of the current energy policy would threaten the UK's energy security and force it to change its stance about a concerted EU-wide external energy policy.

Additionally, The UK looks to have some problems with the EU's new deals regarding parts of common energy policy such as energy efficiency deal. The government is said to water down the EU energy efficiency deal. However, the energy and climate change secretary, Davey, claimed at tit was a victory for the UK and action on climate change, and he denied the claim that the UK had watered down the agreement. He said: "The deal which has now been agreed is good for the UK and for the EU as a whole and maintains the EU's position as a global leader in tackling climate change. It signals a step-change in energy efficiency, and for the first time sets legally binding energy saving targets, which at a time of economic challenge will help improve the EU's competitiveness and boost growth.""[116]Te government's statements look like as they are for a common energy policies, but it is still unquestionable that they are for or against a common policy.

2.3. Central Eastern European Countries

When new member states from Central and Eastern Europe completed their accession to the EU, the EU had incorporated countries due to security concerns and interests. Especially the debate of the EU energy security has gained new momentum by the accession of Central and Eastern European Countries (CEECs) in 2004, since CEECs were notably

[114]IEA, 2011d.
[115]The Future of UK Gas Supplies, 2004.
[116] Euroactive: UK government waters down EU Energy Effiecincy Deal. http://www.euractiv.com/energy-efficiency/uk-government-waters-eu-energy-e-news-513333.

different from old member states. This act became most evident in relation to the issue of external supply, where the new members have to engage with an overdependence on one source of oil and, especially, natural gas. It is claimed that the reliance of the CEECs on Russian pipelines brought Russia precisely back into the European security debates, and it would not be too inconsequential. Moreover, there were problematic issues and hostile relations between some of the new members and Russia, so the securitization of EU energy policy looks like a natural development for the EU.

CEE countries still depend on Russia for their energy imports; Russia provides natural gas to these countries at much lower levels than the international gas markets. Russia's decision to apply different price rises to these countries makes those angry that have had to defray the cost of this Russian policy. Energy disputes between Russia and transit countries really brought to the surface the exposure of the EU and CEE countries to supply security threats.

It would surely be too simplistic to put the countries of Central and Eastern Europe into a homogenous group; however they can be roughly separated into two groups with regards to their foreign policy behavior. Poland and the Baltic states usually promote the eastern orientation of EU foreign policy and the close maintenance to the American position in global crises. On the other hand, the Czech Republic, Slovakia, Hungary and Slovenia are showing the same tendencies as the EU mainstream.[117] These separations are also evident in relation to Russia: "Other than Poland, the Central European countries tend to have relatively trouble-free relations with Moscow. Some, such as Bulgaria, Hungary and Slovakia, have recently been mimicking the bigger EU countries by forging closer bilateral ties with Russia." [118] At this point, the intergovernmental process can be seen as the smaller states forging alliances with the larger states. As of 1 January 2011, the EU had 124 storage facilities, and they have a maximum working volume of 86 bcm.[119] Table includes only the selected countries from CEECs and they have different levels as noted.

[117]Kral, D. (2005): Enlarging EU Foreign Policy: The Role of the New EU Member States and Candidate Countries. Prague: EUROPEUM Institute for European Policy.
[118]BARYSCH, K. (2007c): Russia, realism and EU unity. Centre for European Reform policy brief, July 2007. www.cer.org.uk.
[119] Eurogas, 2011.

Table 2.1: Natural Gas Underground Storages at 1 January 2011

Countries	Number of Storage facilities	Maximum Working Volume (mm^3)	Maximum Withdrawal Capacity (mm3/ day)
Czech Republic	8	3127	52
Hungary	5	6330	72
Poland	7	1640	32
Slovak Republic	1	2785	39
Lithuania	0	0	0
Estonia	0	0	0
Slovenia	0	0	0
Romania	8	2760	28

The new members are almost fully dependent on Russia unlike old EU member states. For example: Slovakia, which imports 97 % of oil and 98 % of natural gas from Russia and also depends on it for supplies of nuclear fuel, is a special case, but even the rest of the countries are in fairly similar situations.[120]Moreover, Eastern European countries are also deeply affected by Russian companies' "pipeline politics". This can be regarded as another controlling mechanism for Russia in order to shape the politics of the Eastern European countries according to its wishes. The Russian-German agreement on building a gas pipeline through the Baltic Sea indicates that the new route will ultimately bypass Poland, and this country will be in a strategically weakened position after the placement of this gas pipeline. Actually, it is not surprising that Poland has become one of the staunchestdefendants of a common EU energy policy, and moreover, it has called on solidarity among the member states to resist the threat coming from Russian behavior. The other CEECs, such as Hungary, have not decided for counteracting but rather bandwagoning when its Prime Minister agreed to the Russian proposal that the Blue Stream pipeline would be extended to Hungary. The offer was accomplished through a promise by Gazprom to build a large gas-storage facility in the country which could become the hub for all of Central Europe. This Hungarian decision

[120]Monaghan, A. & Montanaro, L. (2006): EU-Russia energy relations: the need for active engagement. European Policy Centre Issue Paper No. 45, March 2006, www.theepc.eu.

brought a serious blow to the EU common project which should follow nearly the same transport route.[121]

The states of Central and Eastern Europe are in a paradoxical situation; caught between historically motivated suspicion of Russian motives and at the same times their almost complete dependency on Russian oil and gas. It is clear that Eastern Europe is not in a position to become a conclusive factor in the debates on EU energy security. Even though the CEECs would exhibit a united front, they would have to compete for their vision with countries which have drawn their attention to North Africa (France, Italy) or the North Sea (Great Britain, Scandinavian states), or whose relationship with Russia runs on a completely different track (Germany).[122] Beside this fact, since Russia and its behavior is a challenge for the rest of the EU, the CEECs can bring some leverage in influencing the EU energy security. While they are caught in a dilemma because they do not trust Russia historically, they need Russia for their energy security. This is the main reason they are looking for ways to reduce their dependence on the Russians. In order to explain CEECs' role in the energy security, some selected countries will be mentioned briefly in the following part.

2.3.1. Czech Republic

The Czech Republic', a landlocked country in Central Europe, is bordered by Poland to the northeast, Slovakia to the east, Austria to the south, and Germany to the west and northwest. Today, gas consumption in the Czech Republic increased by approximately 10 percent considering past years. According to the trading companies, the total volume of imported gas was 8.3 percent higher than in 2009.[123] Actually, supplies from the European Union and Russia were used more than in the previous years, due to imports from Norway. It is to be mentioned that not all of the imported gas was consumed in the Czech Republic; a certain part of this gas was intended for foreign customers.[124]

Timothy Boon von Ochssée and Coby van der Linde have expressed Russian threat about dependency as:

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[121]Oklestkova, Ivana&Karasek,Tomas, The Impact of CEECs on the Changing Energy Security Concept of the EU, Originally published in: European Integration, Structural Change and its Impact on European Foreign Policies. Shanghai: ECNU Publishing House, 2008.

[122]Oklestkova, Ivana&Karasek,Tomas, The Impact of CEECs on the Changing Energy Security Concept of the EU, Originally published in: European Integration, Structural Change and its Impact on European Foreign Poli cies. Shanghai: ECNU Publishing House, 2008.

[123] The Czech Republic's National Report on the Electricity and Gas Industries for 2010. http://www.energyregulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/NATIONAL_REPORTS/National%20Reporting%202011/NR_En/C11_NR_Czech%20Rep-EN.pdf.

[124] Ibid.

"the 'old' European allies seek improved ties with Russia in order to secure long-term energy interests, examples of which include Germany and France, but also the Netherlands and Italy. The 'new' European allies such as Poland, the Czech Republic seek to distance themselves from Moscow to the farthest extent possible, to the effect of wishing to eliminate their dependence on Russian energy."[125]

From this quote, the position of Czech Republic with regards to energy and energy security issues can be clearly understood. The Czech Republic experienced shortages of 50% of its oil deliveries from Russia after the accession.[126] These admitted on the same day as the Czech Republic signed a bilateral treaty with the United States which allows the latter to place parts of an anti-missile defense system on the former's soil, a deal strongly opposed by Russia.

Czech Republic also concentrated on renewable resources and electricity. The country is cooperating with Germany, moreover the Czech Prime Minister, Nečas, has declared that "*Our policy is to strengthen the Czech power distribution network, involving a relatively significant investment over the coming years. The way forward is not to separate our systems, but instead to connect them,*"[127] Angela Merkel, the Germans also mention about their content about the issue and she said: "*We are very pleased that the Czech Republic does not want to separate, and is working towards an integrated electricity market.*"[128]

2.3.2. Hungary

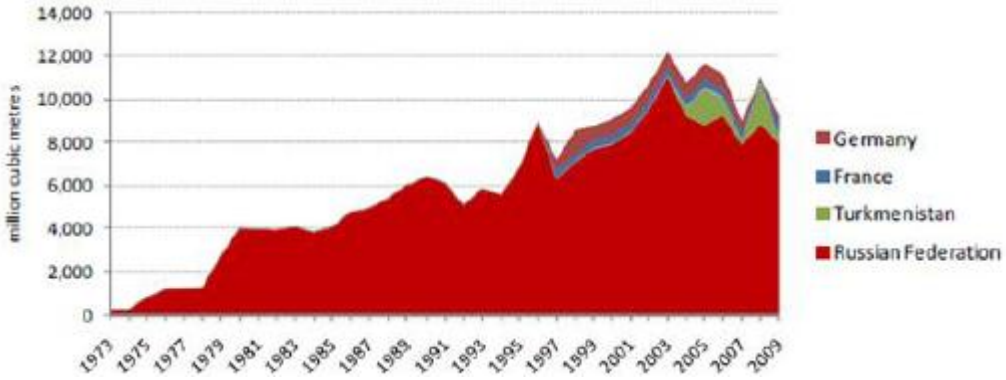
The CEECs are to a much larger extent dependent on Russian gas compared to their western counterparts. Even though they have substantial amounts of domestic coal reserves, they do not actively use their full potential, because coal is no longer seen as a viable energy source because of its ecological harmfulness. As a result of it, gas is imported in large quantities. Importing gas creates complete dependence of some countries on Russian gas.

Hungary is located at the center of Europe who has borders with Romania, Austria, and Ukraine. Its population is nearly 10 million and it has relatively high consumption of natural gas. Hungary has the fourth largest share of natural gas in the total primary energy consumption after the UK, Netherlands, and Italy. Moreover, it imports more than 70 percent

[125] Boon von Ochssée, Timothy and Coby van der Linde, "Two Sides of the Same Coin?: Energy Security Thinking in the US Versus Europe," (University of Groningen): 16.
[126] Neuman, Marek, Energy as the Defining Component in EU-Russian Relations After the Eastern EU Enlargement, University of Groningen, pp.6.
[127] The Czech Republic and Germany adresses the energy issue, http://www.vlada.cz/en/media-centrum/aktualne/the-czech-republic-and-germany-address-energy-issues-94362/.
[128] Ibid.

of its gas from Russia. There is a decreasing tendency in the indigenous production resulting in growing dependency, so it is essential for Hungary to diversify its sources of supply as it is highly dependent on Russian supplies.[129] Concerning to its dependence on Russia, energy policy in Hungary made effort to create a balance between its various objectives, regarding the concepts Hungary shares with the International Energy Agency, and with regards to EU legislation. According to the *Hungarian National Energy Strategy 2030*, the country is thought to consume around 17 bcm of natural gas by the year 2030.[130]

Figure 2.4 : Natural gas imports of Hungary



Hungary's gas dependence is quite astounding. The share of natural gas in primary energy consumption is nearly 40% within the EU. Imports come from Russia and in line with the contract between Gazprom and Hungarian Energy Company MOL; Hungary is expected to get an annual 10 billion cubic meters of natural gas by 2015. [131] Theoretically, the HAG pipeline, connecting Győr in Western Hungary to Baumgarten in Austria, would actually help diversify imports. However, this could only supply Russian gas, at a significant premium compared to direct delivery. Hungary could also connect to the gas pipeline which intersects Slovakia; even this also would only supply Russian gas.

Finally, Hungary is an important natural gas consuming country among the EU states. The consumption of natural gas trend is likely to increase, whereas, as it is the case for most of the EU states, the domestic production is decreasing. Rely on imports particularly from

[129] Energy Delta Institute, Energy Business School, "Hungary". http://www.energydelta.org/mainmenu/edi-intelligence-2/our-services/interactive-world-gasmap/europe/hungary.
[130] Breathing Earth.
[131] Analysis: Energy dependence and supply in Central and Eastern Europe , Published 15 May 2006. http://www.euractiv.com/energy/analysis-energy-dependence-supply-central-eastern-europe/article-155274.

Russia, Hungary desires to diversify its sources and supports projects that will supply additional gas to the CEECs.

2.3.3. Slovak Republic

The Slovak Republic is a perfect example of what can happen to a country when it doesn't pay attention to its own energy security. Slovakia has historically been one of the most fragile countries in Europe in terms of energy security. There are many reasons for this situation, such as the timing of energy privatization and the general inability of its government to transform its declarations into deeds with a prioritization on this issue. U.S. Ambassador Theodore Sedgwick mentioned that Slovakians painfully aware that nearly 100 percent of Slovakia's energy supply comes from Russian fossil fuels. If nothing else, this nation needs to diversify its energy supply.[132]

The primary aims of energy policy since 1993, when Slovakia seceded from the Czechoslovak federation, has been the creation of a new legal framework for the energy sector, an expansion of its domestic gas distribution network, and an increase in its transit capacity.[133] Market building and regulatory aspects of the energy reform took place because of compliance with EU pre-accession pressures, but ameliorating supply security and emergency preparedness lagged behind. Slovakia's energy intensity analyzed in comparison with its immediate neighbors was, until 2006, the highest in the region.[134] Slovakia's energy intensity was greater than that of the Czech Republic until roughly 2007. On the other hand, Hungary uses its energy more efficiently, and Poland less efficiently, in terms of energy intensity.

According to the Eurostat 2009 statistics, the country imports most of its oil and gas, and almost all of its primary coal energy sources.[135] Slovakia also imports all of its nuclear fuel for electricity generation. Nevertheless, the critical fact, which was seen during the January 2009 gas crisis, is the lack of diversification in the sources and transit routes of Slovakia's imports. All of Slovakia's nuclear fuel is brought from Russia. All of its pre-2009 gas imports came from Russia's Gazprom, and about three quarters of its imported oil is from Russia in spite of the existence of the alternative oil pipeline Adria (from the Croatian

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[132] Slovakia's energy concers not far from our own. http://www.huffingtonpost.com/brian-keane/america-oil-costs-_b_875966.html.

[133] Nosko, Andrej & Sevce, Peter, The Evolution of Energy Security in the Slovak Repuplic, 29 September 2010, retrieved from: http://www.ensec.org/index.php?option=com_content&view=article&id=262:the-evolution-of-energy-security-in-the-slovak-republic&catid=110:energysecuritycontent&Itemid=366.

[134] Ibid.

[135] Slovakia Gross Inland Consumption, data by Eurostat 2009.

Adriatic port of Omisalj).[136] The worrying sign is that its imports rely on a single import route via Ukraine. This puts Slovakia in a very problematic position, not only with supply security risks, but also regarding the premium price customers in Slovakia are paying for their energy resources. However, according to the Minister of Economy of the Slovak Republic Tomáš Malatinský Slovakia argued on 29 Novemner 2012 that: "Slovakia currently has sufficient capacity gas storage facilities, which together with interconnections with neighboring countries allows a reliable and safe supply of gas," at The 6th Annual Energy Conference - The Common EU Energy Policy and the Energy Security of Slovakia.[137]

Actually, energy market in Slovakia has problems due to a lack of publicly available figures and information. Considering the availability of natural gas for public use, Slovakia is second country of EU 27. According to International Energy Agency (IEA), energy mix of Slovakia consists of natural gas (30 %), nuclear energy (22 %) and crude oil (21 %).[138] Additionally, the national target of Slovakia on field of exploiting renewable energy sources is to reach the 14 % share in general energy mix by 2020.[139]

Additionally, The Chairman of the Slovak Parliament Pavol Paškaand his counterpart from Turkey Cemil Çiçek met on 12 November 2012 to discuss opportunities for deepening economic cooperation, specifically in the energy sector.[140] Both countries depend on import of primary energy sources. Considering Turkey plays a crucial part in biggest pipeline projects which might increase the energy security of the EU such as South Stream, Nabucco or TAP, Slovak Republic see a potential for energy cooperation with Turkey.[141] Cemil Çiçek stated in the meeting that: "Turkey is interested in deepened the cooperation not only in the economic and trade area, but also in the area of political dialogue, as well as in the energy area. Energy is a vital issue for both countries," [142]

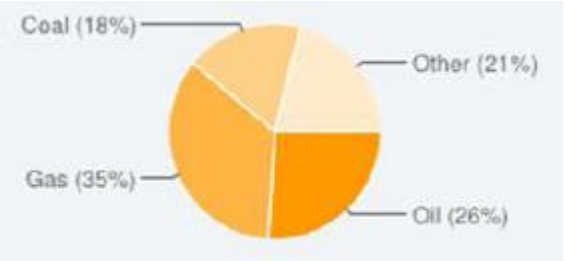
2.3.4. Romania

[136]Nosko, Andrej & Sevce, Peter, The Evolution of Energy Security in the Slovak Repuplic, 29 September 2010, retrieved from: http://www.ensec.org/index.php?option=com_content&view=article&id=262:the-evolution-of-energy-security-in-the-slovak-republic&catid=110:energysecuritycontent&Itemid=366.
[137] Slovakia has the upcoming winter seasonenough gas reserves. http://www.energyinslovakia.sk/search/label/News
[138] IEA, 2010.
[139] Renewable energy in Slovakia, 27 November 2012. http://www.energyinslovakia.sk/search/label/Factsheet.
[140] Slovakia and Turkey may deepen collaboration in the energy sector. http://www.energyinslovakia.sk/search/label/News.
[141] Ibid.
[142] Ibid.

Romania which has borders with Serbia and Hungary is the ninth largest country and seventh most populous country in the European Union.[143] Its reliance on foreign supplies, specifically for gas, is lower than the EU average because of its own reserves.[144] The country has the largest oil and gas reserves in the Central Eastern Europe region.

The country consumed 13,8 bcm of natural gas in 2011.[145] 11 bcm of this amount was its domestic resources and 2,81 bcm was imported from Russia in 2011.[146] The gas consumption of Romanis is rising, with regards to the huge reserves and the availability of the supplies in the country. However, natural gas reserves is decreasing. It has 0,1 tcm of proven natural gas reserves in 2011, compared to2010 in which that of 0,6 bcm.[147]

Figure 2.5: Total primary energy consumption of Romania (2010)



Source: Energy Delta Institute[148]

According to Energy Delta Institute figure, natural gas has 35 percent share in the total primary energy consumption, whereas oil and coal has 26 percent and 18 percent. It is expected that gas consumption will rise more than 16 bcm in 2035 according to the IEA, Golden Age of Gas (GAS) ratios.[149]

As noted, Romania produces more than 80 percent of its demand domestically, so it has not much concern about supply security. It produced 11 bcm of natural gas indigenously

[143] Global trade, "Oil and Gas Market Overview-An Expert's View about Energy in Romania", 24 Oct 2011. http://www.globaltrade.net/f/market-research/text/Romania/Energy-Coke-Oil-Gas-Electricity-Oil-and-Gas-Market-Overview.html.
[144] Ibid.
[145] BP, 2012.
[146] Gazprom Export, Foreign Partners, "Romania". http://www.gazpromexport.ru/en/partners/romania/.
[147] BP, 2011.
BP, 2012.
[148] Energy Delta Institute, Energy Business School, "Romania". http://www.energydelta.org/mainmenu/edi-intelligence-2/our-services/country-gas-profiles/romania.
[149] Annual growth rate is given as 0.7% for the EU according to *GAS 2011*.
Breathing Earth.

in 2011, whereas its production was between 12-12,5 bcm/y between 2001-2009.[150] Considering gas imports, Romania is 15 percent dependent on imported gas butthe country is only dependent on Russia for its gas imports.[151] Moreover, it is known that as a result of long term contract, Gazprom will continue supplying gas to Romania until 2030.[152] Eventhough Romania is not highly dependent on imports, it could benefit from diversifying its supplier countries since its national production is decreasing and more imports will be needed. Maybe, for that reason, Romanian President Traian Basescu has said the EU needs to send positive signals to Turkey. He mentioned that: "We do believe the Black Sea carries great potential for cooperation involving all interested countries, from the region and beyond, but it also faces a range of specific energy-related opportunities and challenges. Wind, hydro and solar energy could make the region a key element of Europe's energy strategy."[153]

2.4.Conclusion

Considering the EU security concept, it is evident that the EU energy policy is a complex issue which involves many different economic, environmental, technological, as well as political and security aspects. Security of external supply, which is intensely debated in connection with the EU eastern enlargement, is only one of the components in the whole spectrum. Nonetheless, it is a crucial part of it, and Russia is the most prominent supplier of oil and natural gas for the Union. From this point of view, the connection between enlargement and the formulation of the EU's energy security concept exists specifically due to the members' almost complete dependence on Russian resources. The countries of Central and Eastern Europe have only a marginal influence on the formulation of the EU energy security strategy. They can only use the existing suspicions against Russian motives to support the framing of a truly common EU energy policy. If this policy was successfully established, it would bring long-terms benefits to all parties.

Russia can potentially control domestic gas supply, separate EU member states and offer to sell to those who can pay higher prices. Russia's interest is to increase the high price for gas to control the upper and lower streams including the gas field, as well as transportation. Thus, every player has to depend on Russia. For instance, the Czech Republic has oil pipelines from Germany providing 20 percent of their energy needs. Thus, this

[150] KMPG Global Energy Institute, *op. cit.*
[151] Energy Delta Institute, Energy Business School, "Romania".
[152] Gazprom Export, Foreign Partners, "Romania".
http://www.gazpromexport.ru/en/partners/romania/.
[153] Romanian leader urges the EU to send a positive signals to Turkey.
http://www.todayszaman.com/news-265399-romanian-leader-urges-eu-to-send-positive-signals-to-turkey.html.

country is somewhat independent from Russia and Russia, in turn, deals with the Czech Republic in a quite amicable manner. The solution to the energy problem is not to have many weak players deal with Russia, but rather one big player. Though the North Stream project is somehow like the energy NATO initiated by Poland, it is not the right way to approach this issue. The EU plus eastern EU countries can be one big player with one common EU policy. However, before the EU common policy, each country can set up the cooperation mechanism. Moreover, the same rule should be introduced to Russian companies to avoid a monopoly. Transparency is also crucial. Democratic control should be introduced to societies in eastern countries. Otherwise, the possible outcome could be that all the pipelines are owned by Russian companies.

In assessing the EU security concept, one must realize that the EU energy policy is a complex issue that encompass many different economic, environmental, technological, as well as political and security aspects. Security of external supply, which is the most hotly debated topic in connection with the EU eastern enlargement, is one of the components in the whole spectrum. Nevertheless, it is an important part of it, and Russia stands out as the most prominent supplier of oil and natural gas for the Union. From this point of view, the connection between the enlargement and the formulation of the EU's energy security concept clearly exists, as the members' dependence on Russian resources is almost complete. Beyond this factual link, the countries of Central and Eastern Europe have only a marginal influence on the formulation of the EU energy security strategy. They can nevertheless use the existing suspicions against Russian motives to support the framing of a truly common EU energy policy. If successfully established, such a policy would bring long-terms benefits to all parties concerned, including Russia.

In short, it can be said that energy and energy security occupies a big place in the members states' political and economic agenda. Moreover, they see this issue as a union issue, given that policies are not commonly held by all member states, and so the principle of supranationality does not work in the energy security issue. This situation affects both common energy policy and foreign policy of the EU. The energy security issue places the European Union in a fragile position.

As Moravcsik argues at his exposition;

> "…is that the broad lines of European integration since 1955 reflect three factors: patterns of commercial exchange, the relative bargaining power of nationalgovernments, and the incentives to enhance the credibility of interstate

commitments. Most fundamental of these was commercial interest. European integration resulted from a series of rational choices made by national leaders who consistently pursued economic interests – primarily the commercialinterests of powerful economic producers and secondarily the macroeconomic preferences of ruling governmental coalitions – that evolved slowly in response to structural incentives in the global economy.When such interests converged, integration advanced." [154]

This view is certainly true for the energy policy, since the member state preferences matter the most in shaping the EU's energy policy. The EU member states have different interests and needs vis a vis both energy and their reliance on Russia, this prevents the EU from formulating a coherent, credible energy policy even though the Commission has initiated attempts to build common strategies for the EU energy security.

[154]Moravcsik, A. 1998. The Choice for Europe: Social Purpose & State Power from Messina to Maastricht. Ithaca: Cornell University Press.

CHAPTER 3- THE CRITICAL ROLE OF TURKEY IN EUROPEAN ENERGY SECURITY

The major natural gas suppliers and the possible future suppliers to the EU are mainly the neighbours of Turkey and also the transport routes to the EU is likely to cross over Turkey. The EU has a developed economy and compared to other regions, its energy need is increasing very fast. However, the EU cannot diversify its energy resources as it is desired. In addition to the diversification problem, there is a security problem with the energy issue in the EU. Russia is the very first energy source for the EU, but it is not a sustainable supplier. There is a political equivocacy in Russia and as a state; it has an inclination to use its energy ammunition in the political arena. Therefore, these moves increase the questions that arise and the disbelief in relations between the EU and Russia.[155] This chapter sets out the potential and critical role of Turkey as a transit state for the EU, with particular attention the transport routes crossing over Turkey. Additionally, how much this role is effective for Turkey's potential membership to the EU is also mentioned.

3.1. Potential Role of Turkey

Turkey comes to the forefront as a possible stabilizer of the Russian and North African energy lines. Its geopolitical position becomes increasingly critical and important for the EU. Its role is very important as a gateway through which natural gas can be transported to the European Union. This role is becoming increasingly important as the European Union deals with the interrelated problems of ensuring energy security and the provision of energy supplies from multiple sources at competitive prices. Moreover, Turkey is a net energy importer itself and a major market for regional producers. Turkey has the ability and willingness to develop major transit systems for gas as well as oil, so its role becomes important as a country enabling hydrocarbon resource to access European markets by pipeline from such diverse regions as the Caspian, Central Asia, the Gulf, and the Eastern Mediterranean.

Considering Turkey's special role as a transit state, actually, Turkey is not a hydrocarbon resource rich country. Therefore, it uses high levels of fosil fuels. However, the

[155] John D. Grace, Russian Oil Supply, Performance and Prospects, (Oxford: Oxford Institute for Energy Studies, 2005).

conventional hydrocarbon reserves of Turkey is insignificant except for coal. Despite this disadvantage, Turkey is located in between energy producers who have significant volumes of natural gas. With numbers, world's 71,8 percent of proven gas reserves and 72.7 percent of proven oil reserves are located around Turkey.[156]Turning to the EU, as a biggest energy consumer in the world, mostly of gas, lies in the west. As a result, Turkey is thought to play the role of an energy hub and a corridor between the supplier countries and the consumer countries. Moreover, it is stated in Turkey's *Strategic Plan for 2010-2014*, the long-term aim of Turkey is to become "… country into an energy hub and terminal by using the geo-strategic position effectively within the framework of the regional cooperation processes".[157] It is understood from the statement that Turkey's ambition is to become a state of natural gas to Europe. Additionally, Minister of Energy and Natural Resources of Turkey, Taner Yıldız told more about the situation as: "…the energy resources in eastern countries through actualizing the geographical features that will enable transportation of such resources to western countries and the projects that will cover the commercial and political dimension of the involvement. The geo-strategic position of our country has been rendered with comprehensive and strategic studies and Turkey has acquired an identity of an "energy corridor" and also has become the new and the critical actor of the multinational oil and natural gas pipeline projects and the international energy arena."[158]

Having said that, this chapter is aimed at explaining the critical place of Turkey in the European energy security and emphasizes its geographical role for pipelines and new energy related projects, like the Nabucco streamline. Although the central role that Nabucco plays has diminished for multiple reasons since 2009, such as the uncertainty over European demand, the uncertainty about the supplies, Turkey's geopolitical importance and the possiblity of being an energy corridor is still significant. It is because of the fact that the strategic importance of Turkey gained much more importance after the U.S. support for the pipeline developments in the Caspian region in the1990s. Moreover, the political and economic development and independence of the post-Soviet states was significant for the Washington and still is. For that reason, the EU and the U.S. show support to Turkey's aim as to become the "fourth artery" to the EU. However, still, there are some challenges with regards to its important role beside the advantages which will be explained in further sections.

[156] Roberts, *op. cit.*
[157] The Republic of Turkey Ministry of Energy and Natural Resources, "Strategic Plan (2010 – 2014)", pp. 29. http://www.enerji.gov.tr/yayinlar_raporlar_EN/ETKB_2010_2014_Stratejik_Plani_EN.pdf.
[158] Ibid.

Turkey is located in a place where most of energy routes intersect. In the north of Turkey, is located Russia who is like the crown of many resources. To the south and east, there are Middle Eastern countries that have the 65% of the petrol and natural gas resources.[159]Additionally, there are Caspian region countries that have proven to be very crucial countries for the world energy resources. For instance, Kazakhstan is estimated to have greater oil resources, more so than Iran that is the biggest oil producer in the world.[160]Considering all those countries around Turkey, 72% of the oil reserves of the world are deployed around Turkey.[161] Table shows the reserves, the production, the consumption and the import export balance of the countries around Turkey's vicinity.

Table 3.1: The natural gas producers in Turkey's neighborhood

Region / Country	Proven reserves (tcm)	Share of total	Production (bcm)	Consumption (bcm)	Imports (bcm)	Exports (bcm)	Extra gas (bcm)
Central Asia/Caspian	29.1	14 %	150.6	91.5	n/a	60.6	-1.5
Azerbaijan	1.3	0.6 %	14.8	8.2	n/a	6.6	0
Turkmenistan	24.3	11.7 %	59.5	25.0	n/a	34.6	-0.1
Uzbekistan	1.6	0.8 %	57.0	49.1	n/a	7.9	0.0
Kazakhstan	1.9	0.9 %	19.3	9.2	n/a	11.5	-1.4
Middle East	70.2	33.3 %	408.0	286.5	10.6	130.9	1.2
Iran	33.1	15.6 %	151.8	153.3	10.6	9.1	0
Iraq	3.6	1.7 %	1.9	1.9*	n/a	n/a	0
Qatar	25.0	12 %	146.8	23.8	n/a	121.8	1.2
Saudi Arabia	8.2	3.9 %	99.2	99.2	n/a	n/a	0
Syria	0.3	0.1 %	8.3	8.3*	n/a	n/a	0
Africa	2.2	1.1 %	61.3	49.6	n/a	8.6	3.1
Egypt	2.2	1.1 %	61.3	49.6	n/a	8.6	3.1
Russia	44.6	21.4 %	607.0	424.6	30.1	221.4	-8.9
Total:	146.1	69,8 %	1226.9	852.2	40.7	421.5	-6.1

Source: BP, 2012.

[159]Leonardo Maugeri, *The Age of Oil*, (Westport: Greenwood, 2006), s. 212.
[160]Sedat Laçiner ve Hasan Selim Özertem, 'Hazar Enerji Kaynakları: Enerji, Siyaset iliskisi veTürkiye', içinde T.MustafaDemirtepe (der.), Orta Asya ve Kafkasya Güç Politikası, (Ankara: USAK Yayınları, 2008), s. 74.
[161]Volkan Özdemir, Turkey's Role in Europe's Energy Security. http://www.isdp.eu/files/publications/books/0802energysecurity-7-Ozdemir.pdf, s. 101.

Although Turkey holds a very critical place in terms of energy, this advantage has not been used to secure relations with Europe. This is related to the fact that Turkey has no energy resources of its own; instead, it has only the advantage of being close to the oil producer and natural gas owner countries. However, how much Turkey uses this advantage is in question for politics. The Turkish application to the EU for full membership goes all the way back to the 1959s. Ankara government applied to the then EEC for membership in 1959 following the Greek application. The Agreement Creating an Association between the Republic of Turkey and the European Economic Community, Ankara Agreement, was signed on 12 September 1963. Agreement entered into force on 1 December 1964 and its aim was to secure Turkey's full membership in the EEC through the establishment in the phases of a customs union that would provide an instrument for integration between the EEC and Turkey. The Ankara Agreement contemplated the progressive creation a Customs Union that would make two parties closer in economic and trade matters. Following this process, the EEC would give Turkey financial assistance. On 13 November 1970, the Additional Protocol deployed in a detailed fashion how the Customs Union would be created. Turkish application was not evaluated with the Ankara agreement but with Treaty of Rome, and this is actually the normal procedure. The decision underlined Turkey eligibility for membership however it required a depth analysis until the emergence of a more favorable environment. It is also stated that a detailed cooperation program was needed for both sides in order to achieve integration and added that the Customs Union had to be completed in 1995. Since that time many steps have taken but what about energy issue? From 1995 to 2000 the role of energy in the relations between Turkey and Europe has been nearly zero. European states are very dependent on outside countries for the oil and natural gas issue. On the other side, Turkey is surrounded by energy resources; however, it had no important role in the energy issue for a long time. Energy line went through countries like Russia and Algeria by following routes other than Turkey and reached to Western Europe. When the 2000s came, Turkey's role on European energy security became increasingly important as a result of the dissolution of the Soviet Union in 90s and then, the developments in the Caspian region due to the dissolution. It became possible to access to Caspian resources with the collapse of the Soviet Union. Importantly, the countries in the region, Azerbaijan, Turkmenistan, Kazakhstan, and Uzbekistan are really rich regarding to natural gas and oil resources. Moreover, the total proven reserves natural gas of these countries is about 29,1 tcm.[162]

[162] BP, 2012.

The European Union shows that the union has given importance to Turkey about energy issue with a note prepared by European Parliament, called "EU- Turkey Relations in the Field of Energy". In this paper, Turkey's role as a partner of EU's energy transit country, cooperation between EU and Turkey on energy and Turkey's harmonization works in accordance with acquis was evaluated. In this paper, it is stated that:

> "The potential of Turkey to become an important country for oil and gas transit from Russia, the Caspian Sea region and the Persian Gulf adds to the strategic importance of Turkey to the EU. Turkey also connects the EU with the Middle East and is an important player in the Mediterranean. In respect of energy, the role of Turkey is bound to even grow because of the increasing volumes of oil and gas that will transit through the country, from both Persian Gulf producers, the Caspian Sea and Russia. In any event, wider market integration, including energy trade, is and will be an important policy tool to secure energy flows."[163]

As it is understood from the passage, the EU had begun to prepare reports which emphasized the need for Turkey in the energy and energy security field. Recently, on 14 June 2012, European Commissioner for Energy Günther Oettinger and Commissioner for Enlargement and European Neighbourhood Policy Štefan Füle met with Turkish Minister for EU Affairs and Chief Negotiator Egemen Bağış and Energy Minister Taner Yildiz in Stuttgart in order to discuss enhanced energy relations with Turkey, in the framework of the positive agenda for Turkey. It is stated in the meeting that "Turkey and EU are partners in promoting the development of bidirectional pipeline connections around the Southern Black Sea, aimed at strengthening their security of supply."[164]

3.2. Russia and Turkey regarding the EU Energy Security

European energy security and the role of Turkey can be analyzed in relation to Russia. However, it cannot be ignored that Russia is not enough by itself to provide European energy needs. Caspian and Middle East resources are needed too. [165] According to Roland Götz, the real problem in the future will not be the dependency on Russia, but instead whether Russian resources will suffice over time.[166] Russia is also aware of this fact and for that reason, it has

[163]European Parliament, 'EU – Turkey Relations in the Field of Energy', *Policy Department Note*, EXPO/B/KM/2006, 20 April 2006.
[164] Outcome of the meeting of Commissioners Oettinger and Füle and Ministers Yildiz and Bağis on 14 June 2012, in Stuttgart, http://ec.europa.eu/energy/international/bilateral_cooperation/turkey_en.htm.
[165]Does Russia Have Enough Gas?', *Oil and Energy Trends*, Vol. 31, No: 12, Aralık 2006, s. 7-8.
[166]Roland Götz, *Russian Gas and Alternatives for Europe*, (SWP, Haziran 2006), s. 3.

made long term agreements in Central Asia and Caucasus.In this way, the gas sold to Europe will be provided from Caspian region. Nonetheless, Russian leaders try to persuade European officials that Russian gas reserves are enough. President Putin (March 2009) stated that Russia has the enough gas and oil for 100 years for both Russia and Europe.[167]

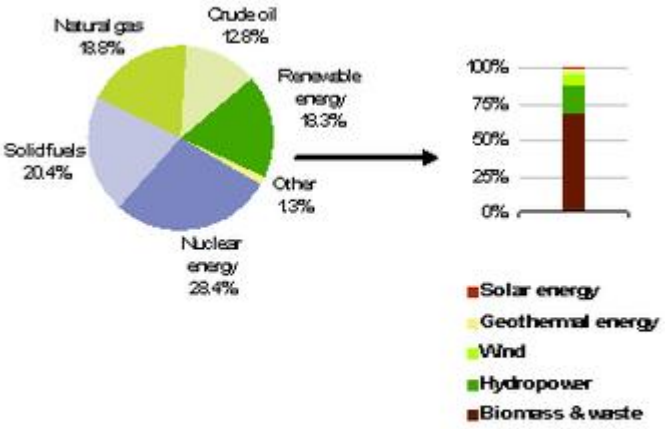
It is clear that Russia will be the most important gas supplier of Europe; however, its market share can also decrease. Therefore, Russia tries to bind Turkish gas to itself in order to protect its market share. Additionally, it prevents new actors from entering the energy market and therefore, retains its advantage within the market. Moreover, Russia can have a problem within European market, since it wastes gas as a result of bad operations and use of old technology. Also, although Gazprom is viewed as a powerful player, it is not always directed well and efficiently as its competitors and makes really important strategic mistakes.

When these points are considered, it is very for Turkey to transmit Caspian and Middle East energy resources to Europe. Therefore, the role of Turkey increases again with this reality, because Turkish routes can meet the needs that Russia cannot provide.

As noted in the previous chapters, for the sake of the European energy security, the EU should find alternative sources of natural gas and should find new ways of transporting it in order to bring gas to the European territory**.** Nor is this all, there are other energy related concerns in Europe with regards to the natural gas issue. This means that when the EU decreases its dependence on Russia, all concerns of the EU related to energy security will be solved. Actually, there many other issues like finding alternative resources other than gas and oil. However, dependence on Russia for natural gas is the very near future problem. Renewable alternative energy sources - solar energy, biodiesel, wind power, tidal power - are the best hope for a permanent cure to the energy crisis. Despite the fact that these energy sources are not yet fully developed, the EU should develop these alternative resources for energy security.

[167]Putin Promises Europe Enough Oil and Gas for 100 Years', *Russia Today*, 10 March 2009.

Figure3.1: Production of primary energy, EU-27, 2009 (% total, based on tonnes of oil equivalent)



Source: Eurostat (online data codes: ten00080, ten00077, ten00079, ten00078, ten00081 and ten00082)

Moreover, energy security debates are mostly concentrated on Western and Central Europe, however, energy security of Eastern European countries, such as the Ukraine and Belarus, is also important. Today, European countries are 50% dependent on Russia for the gas. This percentage is nearly 100% for Eastern European countries as it is mentioned in the Chapter two. [168]Their pipelines increase their bargaining power, but, still, they are not in a good position when compared to Russia. Russia uses the natural gas as a political trump card as it did with Georgia and Lithuania. [169] For instance, the Ukrainian crisis showed that Eastern European countries hold an important card: they are en-route of transit way. Russia is aware of this situation and has worked on by-pass lines in order to lessen dependency on those countries. The North Stream line will be under the Baltic Sea to Germany so it will have reached consuming point. In this way, Baltic and Eastern European countries will be

[168]Pami Aalto (ed.), The EU-Russian Energy Dialogue, Europe's Future Energy Security, (Londra: Ashgate, 2008).
[169]Svante E. Cornell ve Niklas Nilsson (eds.), Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives, (Washington DC: John Hopkins University, 2008), s. 9.

bypassed and with the help of the underwater, their bargaining power rendered by their physical location will have lessened.

By the same logic, South Stream Line will aim to bypass the Eastern European countries and reach Central Europe. It will pass under the Black Sea and reach Bulgaria, Greece, Austria and Hungary directly via two branches. Here, European dependency on Russia will increase and in potential opposition with Russia, Eastern European countries will be in a difficult situation.

As a result, Turkey is entering the natural gas game because the energy routes that pass through Turkey will allow the EU to decrease their dependency on Russian resources. Therefore, Turkey can become the key actor in the energy security of Europe considering its geostrategic position, located between major energy producers in the Caspian Region, the Middle East, Russia, and major energy consumers in Europe. This reality again shows that Turkey has a value for the European Union. This is very important for the Turkish side too, since Turkey is a candidate country, since 1999. There are many obstacles for full membership but at least now, there is a material benefit in the area of energy security, which can open a new way for the accession process. It means that Turkey's place in the energy security can serve positively for both Turkey and the EU, so the role of Turkey in the European energy security is very critical. After the agreement between the Turkish and Azeri authorities on the construction of the Trans-Anatolian gas pipeline TANAP on Turkish territory, Günther Oettinger, the commissioner for energy, welcomed, on 21 November, said that Europe was one step closer to its objective of obtaining gas directly from Azerbaijan and other countries of the Caspian region.[170]

3.3. The EU Dependence on Natural Gas

Natural gas is and will be an important an energy source for the EU. Its share in the total primary energy consumption started to rise after 1990s.[171]Since that time, there was a dramatic increase in the natural gas consumption of the EU. Moreover, this trend is likely to continue. The EU's gas demand is expected to rise by about a quarter by 2030.[172]The figure below shows that the projected natural gas demand for the EU by 2020 will increase too.

[170] Oettinger welcomes Turkish-Azeri deal on TANAP pipeline, By Marie-Martine Buckens | Wednesday 21 November 2012; http://www.europolitics.info/sectorial-policies/oettinger-welcomes-turkish-azeri-deal-on-tanap-pipeline-art345360-14.html

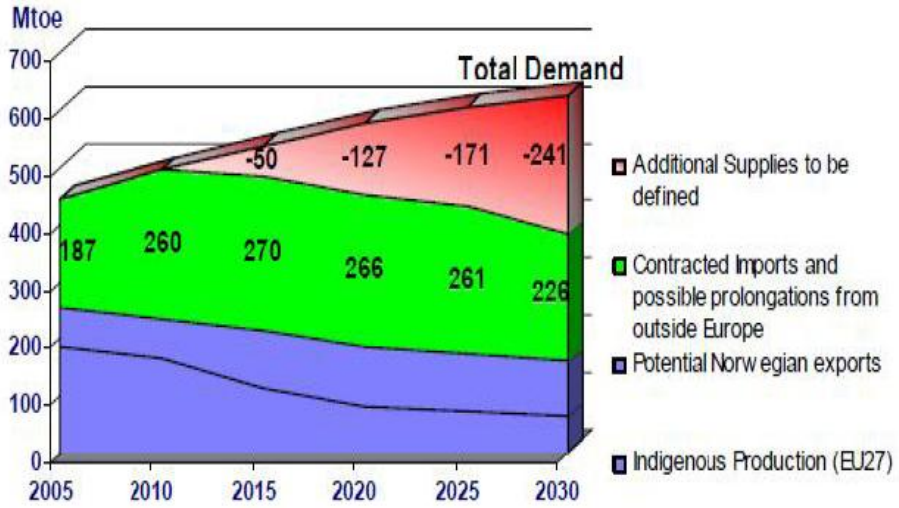
[171] Eurogas, "Statistics 1994-2009". http://eurogas.org/figures_statistics.aspx

172 Barysch, Katinka. "Turkey's role in European energy security". Center for European Forum Essays. UK, 2007.

Moreover, the IEA officials and the company officials like Enno Harks, CEO, BP-Germany, thinks that there is not a slowdown in gas consumption in the European Union.[173]

The EU's share of natural gas in total energy consumption is likely to increase from 25 percent in 2009 to 30 percent in 2035.[174] Probably, oil will again dominate the transportation sector (83 percent); whereas, natural gas will be widely preferred in industry and households. Looking at their share, natural gas placed 25 percent of the energy demand and oil's share was 34 percent in 2009. Moreover, it is expected by IEA that the share of the natural gas in total primary energy demand will increase to 28 percent in 2025 and 30 percent in 2035, however, the share of oil will steadily decline to 28 percent in 2025 and then 25 percent in 2035.[175] Eurogas Statistics 2011 states that the ratio of natural gas in primary energy demand of the EU was 25 percent and that of oil was 34 percent in 2010. It is predicted that natural gas consumption will rise by 5 percent, whereas oil consumption will decrease by 5 percent by 2035. In all predictions of Eurogas, compared to oil, natural gas consumption shows a regular growth pattern. To sum up, the natural gas consumption in the European Union is assumed to increase at a higher speed since it is clean and reserves are increasing in the global level with the help of technical develeopments. Therefore, considering the EU's gren properties, natural gas will keep the significant preferences for the EU and is going to continue to add significantly to energy supply in the EU.[176]

Figure 3.2: Projected natural gas demand for the EU by 2020

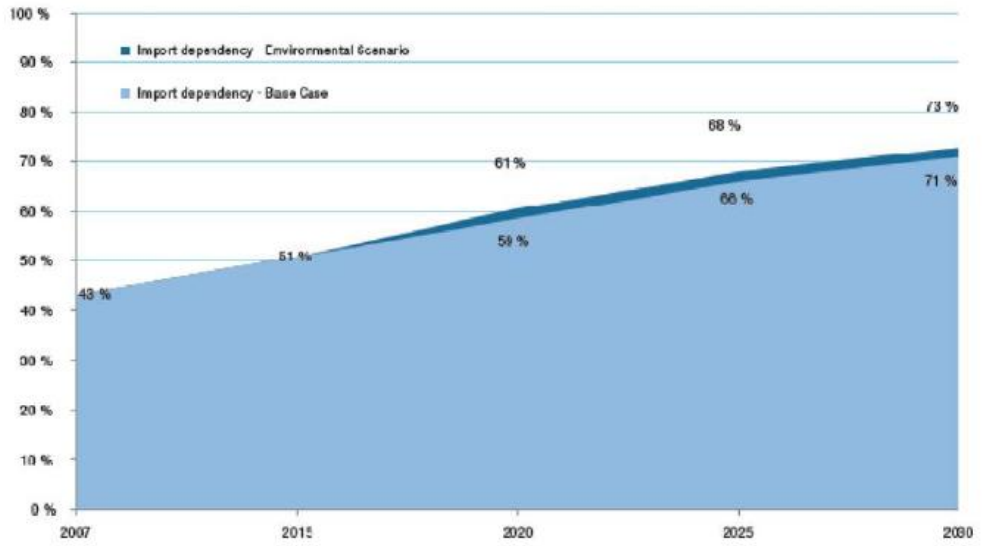


[173] Personal Interview, Enno Harks, 30 March 2012.
[174] OECD/ IEA, *WEO 2011*, pp. 80.
[175] Ibid.
[176] Eurogas, "Natural Gas Demand and Supply, Long-term outlook to 2030". http://www.eurogas.org/uploaded/Eurogas%20long%20term%20outlook%20to%202030%20-%20final.pdf.

Source: Eurogas

Today, the EU is supplying 40% of its gas demand domestically; nevertheless, the statistics show that these domestic resources will deplete gradually in a short period of time.[177] So the imports of the Union will rise to nearly 80% by 2030. From the figure above it is quite sure that the EU's import dependency is increasing continuously without any interruption. The ratio of 60 percent import dependency will expected to increase by 89 percent that means indigenous production almost diminishes by 2030. However, these expectations can change if European unconventional sources are used. On the contrary, the EU will absolutely need more imported gas to meet the growing demand. As a result, the import dependency of the EU will increase and this will cause a strong bargaining chip for the supplier countries by reducing EU's credibility in the long run.

Figure 3.3: The EU Import Dependency from outside Europe



Source: Eurogas[178]

According to IEA, the import demand of the Union was 310 bcm in 2009 and will increase to 540 bcm in 2035. Additionally, the import dependence rate rises from 64 percent in 2009 to 86 percent in 2035 including the imports from Norway.[179]

177 Ibid.
178 Eurogas, "Long term Outlook for Gas Demand and Supply, 2007-2030". http://www.eurogas.org/uploaded/Eurogas%20LT%20Outlook%202007-2030_Final_251110.pdf
179 Ibid.

With regards to suppliers, Russia, Norway, and Algeria supply 68.0% of the EU's natural gas and Russia has approximately 40% share of it.[180] None of the European countries had worried about the reliance on Russian gas until 2006, during the first Ukrainian crises when Gazprom temporarily cutoff gas supply to Ukraine. It was not the 'core European states' who froze to death but the middle and East European countries like Hungary, Austria, Slovenia and many others. So from January 2007 onwards, they took measures to tackle this problem. The European Commission published its energy policy package in 2007, with the main priority determined to be the diversification of supply routes. They agreed on bringing Caspian and Central Asian gas through Russian territory until the Turkey-Greece interconnector inaugurated. But this interconnector remained at small amounts, so it was never as significant as the other supply routes. Therefore, a new plan has to be made in order to diversify the supply and to counter balance the Russian dominance over the European markets.

3.3.1. Regional Gas Disposition

Since its very beginning, the European Union has always been one of the biggest energy consumers in the world and it can be said that the EU has been the most adressing energy market for most of the suppliers. Actually, it is not wrong to say that this fact is changing nowadays due to China and India getting into the market gradually fast. Still, the EU will be expected to remain as one of the biggest consumers for a long period of time.[181]

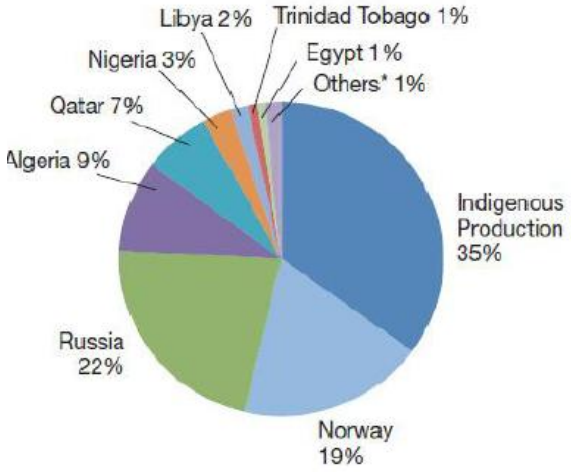
The reserves are very crucial for coutries as their available gas potential. The proven gas reserve conjectures are relied on some issues like technological developments, the current production of the country, the profitability of the future extraction and new discoveries.[182] It means that eventhough the country that does not have the necessary technology to extract it has gas resources, its resources is not considered as proven reserves. In this context, the EU has nearly 7.03 tcm of gas; however, only 3.3 tcm of it is classified as proven reserves.[183]

As noted, Russia is the closest and the biggest natural gas market in Europe's, but EU officials are risingly concerned against on Russian gas. The EU takes the highest volumes of Russian gas flows via Ukraine or Belarus and that makes the market unstable. When there is a dispute between Moscow and Kyiv or Minsk, it results in interruptions in the gas flow, as

180http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Energy_production_and_imports
[181] OECD/ IEA, *WEO 2011*, pp. 80.
[182] Christie, *op. cit.*, pp. 16.
[183] British Petroleum(BP), Statistical Review of World Energy 2012, June 2012. http://www.bp.com/assets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/statistical_review_of_world_energy_full_report_2012.pdf.

was experienced in 2006 and 2009. Additionally, the South East European countries are very vulnerable to these fluctuations since their markets are highly dependent on Russian gas imports.

Figure 3.4: Natural gas supplies to the EU, 2011



Turning to Turkey, it lies adjacent to countries or regions who have some 71.8% of the world's proven gas reserves and some 72.7% of the world's proven oil reserves. Moreover, Turkey is the fifth largest primary energy and eighth largest natural gas consumer in Europe.[184] The share of gas in general energy consumption is 30 percent; the share of coal and oil are 32 and 27 percent.[185] Turkey utilizes 47.5 bcm of natural gas in 2011 and exported 35.6 bcm of piped gas and 6.2 bcm of LNG.[186]Additionally, as the other major emerging economies such as China, Brazil and India, the natural gas consumption in Turkey is also expected to rise considerably in the next 15 years.

Currently, Russia and Turkey relations over the gas transit issue is more important for both sides also for Europe. Russia provides nearly 70 percent of Turkey's natural gas imports, and Turkey can be an alternative route for Russian natural gas deliveries to Europe. For instance, huge amounts of Russian gas could be transported via the pipeline which is constructed under the Southern Corridor project, such as the TANAP. Accordingly, Russian gas will continue to supply Europe from a different direction. Instead of the South Stream

[184] Eurogas, 2011.
[185] Energy Delta Institute, Energy Bussiness School,"Turkey". http://www.energydelta.org/mainmenu/edi-intelligence-2/our-services/country-gas-profiles/country-gas-profileturkey.
[186] BP, 2012.

project, that is more expensive, Russia could transfer its supplies to the European market via Turkish pipeline connections.

Table 3.2 : East- West Energy Corridor

PIPELINE	**ENERGY RESOURCES**	**ORIGIN COUNTRY**	**CURRENT CAPACITY**	**EXISTING SYSTEM**
BAKU-TBILISI-CEYHAN	OIL	AZERBAIJAN	1mb/d	WORKING
BAKU-TBILISI-ERZURUM	GAS	AZEBAIJAN	7 bcm/y	UNDER CONSTRUCTION
TURKMENISTAN-IRAN-TURKEY	GAS	TURKMENISTAN	13 bcm/y	PLANNED
AKTAU-BAKU-TBILISI-CEYHAN	OIL	KAZAKISTAN	1 mb/d	PLANNED

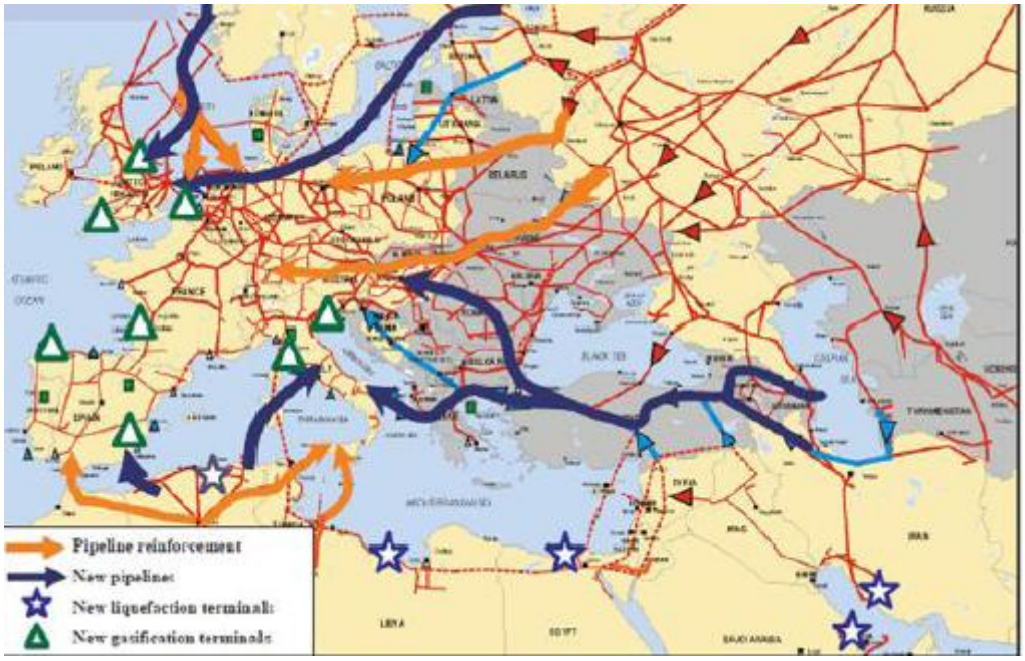
IRAN-TURKEY	GAS	IRAN	10 bcm/y	WORKING

Table 3.3: North- South Energy Corridor

PIPELINE	**ENERGY RESOURCES**	**ORIGIN COUNTRY**	**CURRENT CAPACITY**	**EXISTING SYSTEM**
IRAQ-TURKEY(CEYHAN)	OIL	IRAQ	1,6 mb/d	WORKING
RUSSIA-TURKEY(BLUE STREAM)	GAS	RUSSIA	16 bcm/d	WORKING
IRAQ-TURKEY	GAS	IRAQ	10 bcm/y	PLANNED
RUSSIA-TURKEY-ISRAEL	GAS	IRAQ	10 bcm/y	PLANNED
EGYPT-SYRIA-TURKEY	GAS	EGYPT	12 bcm/y	PLANNED
QATAR-KUWAIT-IRAQ-TURKEY	GAS	QATAR	20-30 bcm/y	PLANNED
S.ARABIA-JORDAN-SYRIA-TURKEY	GAS	S.ARABIA	10-20 bcm/y	PLANNED

Currently, the European Union is the world's biggest gas import market; furthermore, it is the world's fastest-growing energy market. It has a variety of energy import sources, however, it needs to diversify its supplies. At this point, Turkey's role becomes extremely important because it is a natural corridor through a pipeline through which the EU market can access available resources. Currently, the EU receives large volumes of gas from three big sources, including are Russia, the North Sea, and North Africa. Therefore, Turkey's main goal is to become a fourth main artery of Europe**.**

Map 3.1: Ongoing and future gas corridors development to Europe



Source: OME[187]

3.3.2. The EU's gas balance to 2030

The world population is increasing rapidly which cause significant rise in global natural gas consumption. The global population is thought to reach 8.5 billion until the year 2035.[188] Therefore, the global energy consumption will be expected to increase by 40 percent during 2009-2035.[189] Parallel to global tendency, it is expected that total primary energy demand in the EU will rise from 25 percent in 2009 to 30 percent in 2035.[190] Demand for energy resources in the EU will change dramatically in this period.

Additionally, the energy import dependence ratio of EU members is expected to rise 71% by 2030. The EU-30 is forecasted to coume nearly 700 bcm/y of gas by 2030. As a natural outcome, the International Energy Agency announced an incredible dependence on imports of the EU. For instance, Norway (considered as an import source) accounted for one quarter of EU imports in 2000 and is expected to keep its position also by 2030 with 17% of

[187] Haffner et al., *op. cit.* pp. 16.
[188] United Nations, Website, "Population". http://www.un.org/esa/population/publications/longrange2/WorldPop2300final.pdf.
[189] OECD/IEA, *World Energy Outlook(WEO)*, 2011 pp. 69.
[190] OECD/ IEA, *WEO 2011*, pp. 80.

aggregate imports of the EU. Nevertheless, this means that it would be more accurate to evaluate the EU's supplies from Norway as a part of the EUs' indigenous production cause in light of Norway's EEA (European Economic Area) membership and its transformation of the EU's gas directive into local legislation.

Moreover, the text of the European Green Paper of 2002 alleges that Algeria and Russia are positioned on pole positions of external suppliers of gas to the EU, whereas Norway is seen as an internal supplier. Not only was this explored in the European Green Paper of 2002, but the IEA's chief economist, Birol, also pointed the upwards push on EU's imports by 2030 and listed it as follows

•An extra 18 bcm from the Americas (mainly Trinidad & Tobago);

•An extra 51 bcm from Central Asia;

•An extra 79 bcm from Russia;

•An extra 136 bcm from West and North Africa;

•An extra 157 bcm from the Middle East

This is an aggregate amount of 441 bcm/y and most possibly shows a small fall in the IEA's anticipated import needs. Therefore the IEA has created the following evaluation concerning the spread of gas imports to the EU (especially EU-15) for 2000 and 2030.

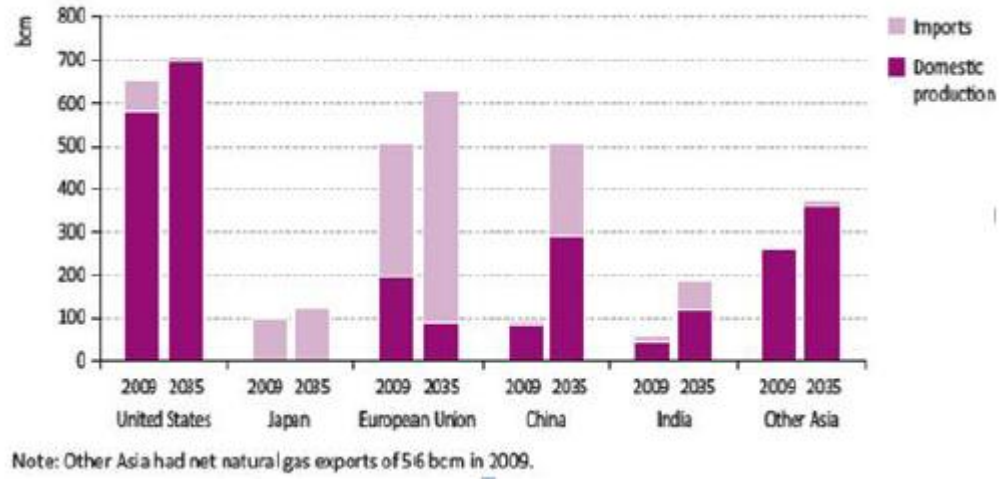
Table 3.4: Energy Import Dependence of EU Members and EU 30 Countries

	1998	**2010**	**2020**	**2030**
EU	49	54	62	71
EU 30	36	42	51	60

Source: The Green Paper, EU Commission, 2006

Moreover, gas import dependence will increase rapidly. Gas will become the most important energy source for Europe in the next decades. IEA mentioned that the EU's primary gas demand is expected to rise by 2,1 % between 2000-2030. As a result of this, gas import will rise rapidly and EU gas import dependence will increase by 69% in 2030.

Figure 3.5: Natural gas demand and the share of imports by region



Source: *WEO 2011*.

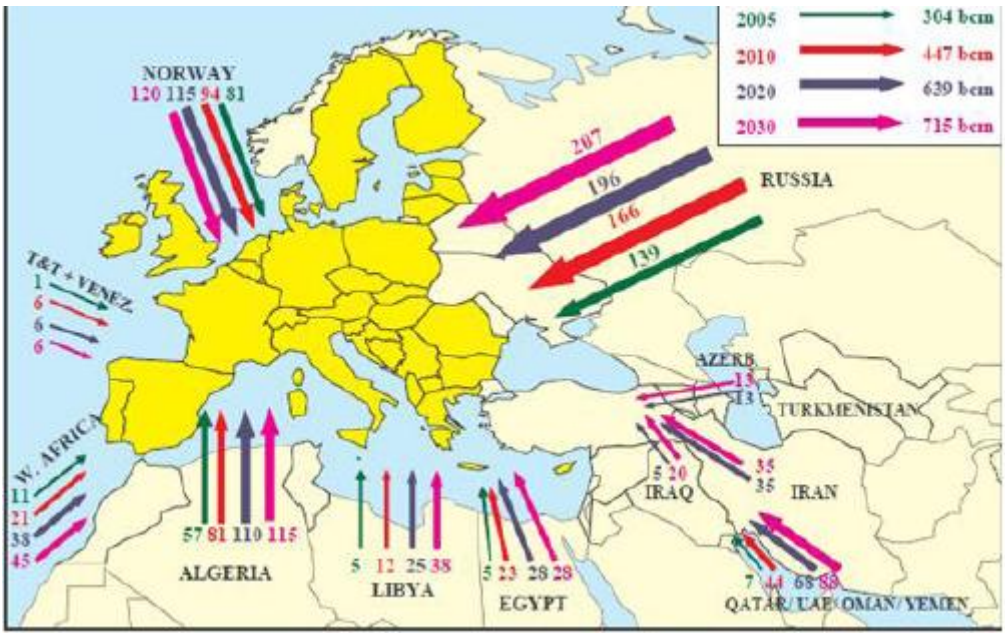
Turkey is seen by the EU as a potential import route, and correspondingly, Turkey views the EU as a market of gas transiting through Turkey. According to International Energy Agency (IEA), the EU's main gas demand is expected to grow by 1.6% from 2010 to 2030. It assumes that the EU's demand will increase in all end-use sectors, especially in power generation. This case will try to define the EU profoundly, not only including the EU-15, which comprises the 15 members of the Union prior to its enlargement on 1 May 2004 but also the EU-30, which is also widely used in various other projections for the EU and includes all the current EU member states plus the three current candidate states of Romania, Bulgaria and Turkey and two other countries observing EU energy principles, such as Norway and Switzerland.

3.4. Alternative Resources and Pipelines

European Union has the high import dependence for natural gas which has already been mentioned above. As noted, Russia is the leading country with regards to natural gas exports to the EU. The EU has to diversify the sources in order to lessen the Russian dependency, so it is looking for alternative supplies. By this way, the EU can meet the energy security standards that are desired. Russia will always remain as a main supplier. Therefore, direct pipelines from Russia to the EU are stil planned, such as the Nord Stream and the South Stream Pipeline project. South Stream Pipeline project is designed to run under the Black Sea, and to reach firstly to the Bulgarian and Hungarian markets. However, the EU and

Turkey have other plans with regards to the Southern Gas Corridor project. Therefore, initially the South Stream project was not considered much by the EU and Turkish officials.[191] Still, Turkey granted permission to build the South Stream pipeline which connects to the same markets as the Southern Gas Corridor on 25 December 2011. Then, the construction was planned to begin in 2012 and the project was thought to start operational in 2015. However, no initiatives has been taken place so far. It is expected to carry 63 bcm/y of natural gas to Europe by two different legs: firstly, Russia to Bulgaria, Serbia, Hungary, Slovenia, Austria, and Italy, and secondly Russia to Croatia, Macedonia, Greece, and Turkey.[192]

Map 3.2: Gas export potential to Europe



Source: OME[193]

The EU has alternatives in order to diversify its resources. Other regions like the Caspian, North Africa, Middle East and Gulf are also significant suppliers. Moreover, there are also resources in the Eastern Mediterranean, in West Africa and in Arctic region which can be used in the near future. The region is really important for the EU since it is the primary region to supply the Southern Gas Corridor. Azerbaijan, Turkmenistan, Kazakhstan, and Uzbekistan are also the important markets in this region in terms of their natural gas

[191] "Turkey caught between Nabucco and South Stream", EurActive, 15 Apr 2011. http://www.eurasiareview.com/15042011-turkey-caught-between-nabucco-and-south-stream/
[192] 204Gazprom, Website, "South Stream". http://www.gazprom.com/about/production/projects/pipelines/south-stream/
[193] Haffner et al., *op. cit.* pp. 16.

production. For instance, Azerbaijan is the first country that is about to enter the EU market with its gas being developed in Shah Deniz I and II fields. Additionally, the other countries in the region like Turkmenistan and Kazakhstan are only able to attain the European markets via Russian territories and involvement.

Table 3.5: The Caspian region natural gas reserves, production, consumption and exports to the EU, 2011

Country	Reserve (tcm)	Production (bcm)	Consumption (bcm)	Export to the EU(bcm)
Azerbaijan	1.3	14.8	8.2	0*
Kazakhstan	1.9	19.3	9.2	0
Turkmenistan	24.3	59.5	25.0	0
Uzbekistan	1.6	57.0	49.1	0

Furthermore, North Africa is relatively important region as an alternative resources. Especially, the Southern European countries prefer the region to buy certain volumes of natural gas in LNG form from North African supplies, such as Algeria, Egypt, and Libya. In short, the North African supplies are a really important competitors against Russian supplies. Despite this fact, it should not be forgotten that the countries in this region are fragile states in terms their state relations and also, their political status are volatile and fragile. For instance, Libya is a good example for this situation. Actually, considering import flexibility, Libya is directly linked to Italy via the "Green Stream" pipeline. Recently, the "Arab Spring",which started as a civil movement, gave a chance for "potential opportunity to increase natural gas production and export from these countries."[194] These countries like Libya and Egypt hand huge natural gas reserves; but, their national policies prevent the production from exporting. Similarly, Algeria is the largest exporter of natural gas in the North African region. Moreover, it is the third largest supplier to Europe following Russia and Norway.

[194] Ratner et al., *op. cit.*, pp. 3.

Table 3.6: North African selected countries proven reserves, production, consumption, and exports to the EU, 2011

Countries	Reserves	Production	Consumption	Exports to EU
Algeria	4.5 tcm	78.0 bcm	28.0 bcm	50.6 bcm
Egypt	2.2 tcm	61.3 bcm	49.6 bcm	4.3 bcm
Libya	1.5 tcm	4.1 bcm	n/a	2.4 bcm
Total	8.2 tcm	143.4 bcm	77.6 bcm	57.3 bcm

Source: BP, 2012; Eurogas, 2011 and CRS.

As the North Africa, the Middle East and Gulf region as a supplier are notorious too as a result of political unrest and unreliable pipeline security. It is known that many attacks have been recently made to Iraqi connections. Anyhow, Iran has the world's second largest reserves, so it is highly attractive for the region, similarly for Europe. Likewise, Qatar is the other most significant country in this region for the EU. The country is sending LNG to Europe at significant amounts and nearly is accounting for 10 percent in total imports to the EU.[195]

In addition to those regions, West Africa where the most signficant country is Nigeria due to its large reserves and exports, and the Eastern Mediterranean region involving Cyprus and Israel where natural gas developments have just started, can be alternatives for the EU. Lastly, Arctic region which is located at the north pole of the Earth, involving of the Arctic Ocean and parts of Russia, Denmark, Norway, Finland, Iceland, Sweden, Canada and the U.S. is not a new source for the EU. Norway and Russia are the two major natural gas producers in the Arctic. Despite accepting the Arctic as an alternative, if its resources can be achieved to use, the EU will again have a increasing dependence on Russian supplies.

3.4.1. Transport and Geography

This section addresses the Turkish role as a transit country by looking at Turkey's closeness to gas producers that are more compatible to the question of EU energy security, and also, the issue that the EU can seek to derive and protect gas from another producer other than Russia. To understand these points, transportation methods of gas should be mentioned briefly. A pipeline is one method and a second one is liquefied natural gas,the method used

[195] Jonathan Callahan, "Qatar's natural gas exports," *Energy Trends*, 6 Dec 2010. http://mazamascience.com/EnergyTrends/?p=237.

by is LNG. When Turkey and the EU case is talked about, pipelines are the most important issue for the energy security. However, their importance is essentially affected by the ability of the EU to increase LNG imports. Since, the direct pipeline systems serving the EU market is at the hand of Russia, and these do not include routes through Turkey. The EU can argue that routes through Turkey are expected to complement, not compete with Russian pipeline supplies. However, Turkey is very close to many other gas producers that can have interests when accessing European markets by means of pipelines through Turkey.

European prospective demand for gas imports is increasing rapidly. Turkey, it is argued, is the key actor in the European energy security since it is adjacent or close to the countries that can meet much of the gas demand of Europe. It is estimated that at least 10 gas producers can have an interest in directing exports to Europe through Turkey, so Turkey is the most important energy gateway for Europe through which regional energy resources can enter. This is especially true in light of Turkey's role as a gas transit way, more so than an oil transit way, given that Europe receives large volumes of gas from three sources: Russia, the North Sea and North Africa. In these conditions, Turkey will constitute the fourth artery of Europe's energy supply in the near future. Its role is really critical as a natural corridor through which gas from a wide variety of supplies in an arc from the Caspian through the Middle East and the Gulf to Egypt can access the growing EU market with the use of pipelines. Therefore, Turkey has all the makings of key actor for Europe in the global energy system.

Table 3.7: The natural gas producers in Turkey's neighborhood

Region / Country	Proven reserves (tcm)	Share of total	Production (bcm)	Consumption (bcm)	Imports (bcm)	Exports (bcm)	Extra gas (bcm)
Central Asia/Caspian	29.1	14 %	150.6	91.5	n/a	60.6	-1.5
Azerbaijan	1.3	0.6 %	14.8	8.2	n/a	6.6	0
Turkmenistan	24.3	11.7 %	59.5	25.0	n/a	34.6	-0.1
Uzbekistan	1.6	0.8 %	57.0	49.1	n/a	7.9	0.0
Kazakhstan	1.9	0.9 %	19.3	9.2	n/a	11.5	-1.4
Middle East	70.2	33.3 %	408.0	286.5	10.6	130.9	1.2
Iran	33.1	15.6 %	151.8	153.3	10.6	9.1	0
Iraq	3.6	1.7 %	1.9	1.9*	n/a	n/a	0
Qatar	25.0	12 %	146.8	23.8	n/a	121.8	1.2
Saudi Arabia	8.2	3.9 %	99.2	99.2	n/a	n/a	0
Syria	0.3	0.1 %	8.3	8.3*	n/a	n/a	0
Africa	2.2	1.1 %	61.3	49.6	n/a	8.6	3.1
Egypt	2.2	1.1 %	61.3	49.6	n/a	8.6	3.1
Russia	44.6	21.4 %	607.0	424.6	30.1	221.4	-8.9
Total:	146.1	69,8 %	1226.9	852.2	40.7	421.5	-6.1

Source: BP, 2012

Countries which are now being studied for delivery of their gas through Europe are Azerbaijan, Kazakhstan, Iran, and Egypt. Moreover, Turkmenistan, Iraq, and Quatar were also previously taken into consideration so they can again be included. Beside these, Syria, Saudi Arabia and Uzbekistan have a vested interest in adding their output to current networks developed to assist their neighbors' exports. These ten countries have 55.34 tcm of gas reserves, which is nearly 35.5% of the world's total reserves of 155.78 tcm.

With respect to Russia, Turkey is essentially a competitor, especially where transit of energy sources is considered. Inspite of this fact, there is one major gas line from Russia to Turkey which can be assumed to have been built with at least a possible view to onward transfer of Russian gas to markets beyond Turkey. The line is the 16 bcm/y Blue Stream line under the Black Sea which was opened since 2002. In simple terms, it could be used to ship gas to markets everywhere in Europe.

In the mid of 2004, Gazprom had rejected to entertain such ideas, even though Turkey had repeatedly brought the issue into negotiations about the pricing of gas delivered through the line. Even so, Russia continued to suggest that the Blue Stream line be used to supply Israel with Russian gas via Turkey.

3.5. The Reasons for Increasing Role of Turkey in Energy Security

Turkey can become the EU's fourth artery if it completes and implements various projects designed to bring gas to and transport from Turkey, and increase Turkey's own throughput capacity. There are 5 potential gas pipelines whose capacity is 44 bcm/year but could be 102 bcm/year to transport gas through Turkey to Europe.

Table 3.8: Potential gas suppliers to the EU supply potential as of 2010

COUNTRY	VOLUME	TRANSIT COUNTRY	POTENTIAL BY 2015	EXISTING SYSTEM
IRAN	10 bcm	TURKEY	20-30 bcm	3- 10 bcm
TURKMENISTAN	13 bcm	IRAN/TURKEY	30 bcm	13 bcm
TURKMENISTAN	34-80 bcm	RUSSIA	80 bcm	50 bcm
TURKMENISTAN	10-36 bcm	RUSSIA/UKRAINE	36 bcm	36 bcm
AZERBAIJAN	7 bcm	TURKEY	20 bcm	6-20 bcm
IRAQ	10 bcm	TURKEY	10 bcm	NONE
EGYPT	4 bcm	JORDAN/SYRIA/TURKEY	10-12 bcm	Link to Jordan

Beside these potential 5 pipelines, there are 6 other pipelines which can transport gas through Turkey to Europe post 2015. These are Qatar via Kuwait-Iraq- Turkey, Egypt via Jordan- Syria, Saudi Arabia via Jordan-Syria-Turkey, Kazakhstan via Azerbaijan- Turkey, Turkmenistan via Azerbaijan- Turkey, via Iran-Turkey, Uzbekistan via Turkmenistan-Azerbaijan- Turkey.

It can be said that there are 3 reasons why Turkey's role in the European energy security has increased. The first one is natural gas becoming very important for both the world's and Europe's energy consumption. For example, in 1990 for 25 European Union states, the share of natural gas usage was 16,7%. In 2000, this number increased 22,8%. In

2007, it increased to more than 60% with the import of 300 billion cubic meter natural gas. According to 2006 European Commission data, it was estimated that in 2010 it would increase to 25,5%. In 2020, it is thought that it will increase to 28,1%. [196] Although natural gas consumption is increasing, it should not be forgotten that oil also continues a large share in consumption.

The increase of hares of natural gas in energy consumption created the need for new pipelines routes. Since then, natural gas is carried by pipelines, as opposed to oil. There is a trade of liquid gas but 70% of the world's natural gas trade is done by pipelines. This number rises to 90% for Europe, so pipelines are vital for European energy security. As a result of this, Turkey becomes the best and critical alternative for European energy security.

It can be mentioned that the energy need of Europe is increasing day by day but at the same time, there are new countries whose energy consumption is increasing too. In the past, these countries did not need this amount of energy; however, with fast growing populations, urbanization and industrialization, they must also enter the energy market. Today, the biggest energy importers of the world are not from Western Europe, but are instead from China, Japan, South Korea and India. What's more, there are other countries increasing their energy import just as quickly. Especially within gas import, Asia is a very important player now. It should be noted that Asian countries make their import with LNG which is a way of gas transportation and it is more expensive than the pipeline method. [197]Therefore, countries that preferred LNG methods, like Japan and China, have begun to turn towards pipelines. This means that Asia's import of gas will be cheap and consistent but for Europe, the price in the market will increase. Moreover, newcomers mean that the share of market will be distributed to more partners.

China and India are consuming more and this increase the pricing. Also, they try to find an alternative place in the market, and this leaves other importers in a difficult situation. For example, China set some rules when it traded with countries that have energy resources which hampered those countries from selling their resources to other countries. In these conditions, Europe should keep its imports consistent and find new resources and transportation ways which are reliable. As a result of this, Caspian Sea and Middle East

[196]European Comission Data, 2006.
[197]Robert Smith, 'Central Asia and Asian Pacific Energy Requirements', içinde Elizabeth Van Wie Davis veRouben Azizian (ed.), Islam, Oil and Geopolitics, Central Asia After September 11, (Rowman & Littlefield, Maryland, 2007), s. 150.

resources have become very important with their undiscovered reserves as the alternative resources. In the same way, natural gas and oil pipelines are very important tools for secure, permanent and reliable import of energy. The markets currently being explored are near Turkey. Therefore, the safest, the most economic and the shortest root for the pipelines to Europe take place in Turkey.

The other reason that Turkey has a critical role in European energy security is the resource problem of Europe. The energy resources of Europe are bottoming out fast. Until quite recently, Europe provided its energy need from Russia, Middle East, and European countries like Norway and the UK. However, Norway and the UK have some problems about their natural gas and oil reserves because of the decreasing production. These countries' consuming needs are increasing but their production capacities are decreasing and their production has proven to be prohibitively expensive. For instance, the UK has been an energy exporter for a long time, whereas it has become a net importer for a couple of years. [198] The same is true for Norway. Many oil wells are closing because they are not financially feasible now. These facts make Europe more dependent on Russia and the Middle East. However, these two markets are not safe enough. Russia can use its power related to energy in political problems like Ukrainian case. In that case, Eastern European Countries had real problems providing heat for the homes of their citizens. Therefore, Europe must find alternative routes for balancing Russia. In this case, the strongest alternative for this situation is Turkey.[199]Especially given that in the Middle Eastern market, there are many inconsistent oil producers who have experienced transportation route problems. Therefore, pipelines are the best alternative for countries considering long term energy trade and again Turkey is the best alternative as a trade route.

Turkey's role on European energy security is not only about its geopolitical position. Turkey has increased its economic power in last few years. Moreover, it has significant experience with energy and energy transportation, its population power, and its stable political situation make Turkey's location critical. It is very hard to find another country like Turkey because Turkey is a reliable and safe country. If the near future is examined, there have been some moves to establish pipelines in the region (Iraq, Syria, Urdun and Saudi

[198] Kevin Morrison and Steve Johnson, 'UK Net Oil Importer for First Time in Decade', Energy Bulletin, 11 Agustos 2004; 'Hamish McRae: UK's Switch from Net Exporter to Importer of Oil will not have a Dramatic Downside', The Independent, 10 Kasım 2005; Adam Porter, 'Is UK Oil Output Running on Empty?', BBC News, 22 Kasım 2005.

[199]Katinka Barysch, 'Turkey's Role in European Energy Security', Report on the 4th CER/British Council/TESEV Bosphorus Conference, Aralık 2007

Arabia are some example countries) but these were not successful attempts. Nevertheless, Turkey is a country that succeeds in keeping pipelines working. For instance, the Iraq-Turkey pipeline (Kerkük-Yumurtalık) has been working for nearly 30years and its capacity is increasing.[200]Natural gas pipelines coming from Russia to Turkey over the Balkans have been working for 20 years and it has now joined to the Blue Stream Line.[201] Both countries are working for the extension of these routes and for the creation of new pipelines. Additionally, there is an effort in order to transport Russian oil to Israel through Turkey and the Mediterranean. Besides these pipelines, the natural gas pipeline between Turkey and Iran was built and has carried natural gas to Turkey for 10 years.[202] Among these pipelines, one of the most important one is the Baku-Tiflis-Ceyhan (BTC) pipeline that carries Azerbaijan oil to the Mediterranean. This is the most expensive and strategic pipeline of the last years. In addition to BTC, the natural gas pipeline was built between Turkey and Azerbaijan. The gas coming from here is not only sold to Turkey but also Greece. Turkey has not found these pipelines to be enough so it is working on new projects. These projects are not only supported and invested by the state, but private sector has the important role too.

Turkey is aiming to add Kazakhstani oil to BTC and Turkish natural gas to the natural gas pipeline. However, there are some technical problems beside political problems. The biggest problem here is to the position of the Caspian Sea. For oil, this problem can be solved easily because Kazakhstani oil can be carried to BTC by sea transportation. On the other hand, for natural gas, this situation is harder to solve. Without any support from Western countries, building these new pipelines has proven extremely challenging. Therefore, Turkey has not limited its new projects with Caspian Sea but it has also considered Iran and Arabian countries routes.

Turkey's biggest pipeline project is surely Nabucco; which will enable that Caspian Sea energy resources be carried to Central Europe over Turkey. The signing of the Nabucco Agreement on July 13th, 2009 was the historical turning point for the European energy security and Turkey's role in this process. Turkey as a transit country signed an agreement with Austria, Bulgaria, Hungary, and Romania for the transport of natural gas to the

[200]Arzu Yorkan, 'Kerkük-Yumurtalık Ham Petrol Boru Hattı ve Gelecegi', B_LGESAM, 14 Mart 2008, http://www.bilgesam.org/tr/index.php?option=com_content&view=article&id=105:kerkuekyumurtalk-ham-petrol-boru-hatt-ve-gelecei&catid=131:enerji&Itemid=146

[201]Volkan Özdemir, 'The Blue Stream Natural Gas Pipeline: Implications on Energy Security and Foreign Policy', *Journal of Central Asian & Caucasian Studies*, Vol 2, No 3, Sonbahar 2007

[202]Arzu Celalifer Ekinci, '_ran – Türkiye Enerji _sbirligi', *USAK Bilgi Notları*, Uluslararası Stratejik Arastırmalar Kurumu, Ankara, Kasım 2008

European Union countries. This pipeline would protect the energy security of Turkey, southeast and central Europe. Therefore, Nabucco is precisely a European project. Considering all of the pipelines from energy producing countries, Turkey has a critical role and its role will increase with time, since these pipelines will pass through Turkey in order to reach energy consumers. What does that mean? This absolutely means that Turkey is going to become a core energy point for Europe in a very short time.

Turkey wants to incorporate Iran and Iraq into this project. As a matter of fact, Turkey wants to include Gulf countries in this project too and it works for this. For example, Qatar is one of the countries that Turkey has worked on establishing close working relationships. Two countries made negotiations for gas import and construction of natural gas pipeline. [203] At first, Qatar did not lean towards Turkey's proposal but then, Turkey convinced Qatar by mentioning that Qatar would be a part of European energy security. On August 2009, Seyh Hamad bin Halife el Thani and Tayyip Erdoğan met and el Thani indicated that both parts were eager to establish this cooperation. [204] Pipelines from Qatar are very important for Turkey since Qatar has the biggest gas production area and this will directly affect Turkey energy security and increase Turkey's role in European energy security. Here, the biggest problem is that whether Saudi Arabia will allow safe conduct transitgiven that the relations between the two countries have not been good for a long time and Saudi Arabia was not very eager for the pipeline projects. If Saudi Arabia creates a problem, pipelines can go through Kuwait and Iraq and then reach Turkey. Actually, Saudi Arabia and Turkey relations are getting better so it can think about a Qatar pipeline project. If Saudi Arabia is persuaded, the Qatar-Turkey line will pass through Saudi Arabia to Urdun, then Syria, and finally to Turkey. The cost of the pipeline is estimated at 10 billion dollars.

The most problematic country for pipelines going to Europe is Iran because of political problems. Despite this, Turkey works for Iran in order to include it in the pipeline projects. In this regard, Turkey understands that Nabucco will come to a deadlock without Iran. As it is known, there is a pipeline between Iran and Turkey and many cities of Turkey heat its homes with this gas. However, it is said that this gas is Turkish gas. Moreover, Turkey wants to transmit Iranian gas first to Turkey, then, to the world market. On October 2009, Prime Minister Recep Tayyip Erdoğan visited Iran and this visit caused an important

[203] 'Turkey to Import Qatar Gas by 2010', Gulf Times, 7 Subat 2008.
[204] 'Qatar Seeks Gas Pipeline to Turkey', The National, 26 Agustos 2009; 'Turkey and Qatar Agree to Build a Natural Gas Pipeline', Journal of Turkish Weekly (JTW), 19 Agustos 2009.

development. This related to Natural Gas Cooperation Agreement which was signed in 2007 whereas it could not be actualized due to political and technical problems. With this visit, two countries signed a frame agreement in accordance with the previous one. [205] According to this agreement Turkey would work in the South Persian region that contained natural gas resources and 50T of natural gas taken from here would belong to Turkey, whether for internal purposes of for marketing to other countries. This problem had not been solved since 2007, since Iran wanted that gas and would transfer to Europe only by transiting from Turkey. However, Turkey demanded the right to market gas. This four million cost project is very critical because if it becomes real Turkey would become an important energy corridor. This project would enable Iranian gas to go to Europe through Turkey and Turkish gas will come to Turkey through Iran. By this way, Turkey will provide the gas for Nabucco, which could potentially become a problem. As it is understood, Turkey wants this project for Nabucco and European markets. Therefore, problems about the agreement with Iran should be solved and when it is solved, Turkey's role in European energy security will increase more than before. Moreover, these are not the only current projects, but there are others, such as Turkish natural gas and Kazak oil, pipeline projects between Turkey, Egypt and Syria. If all of them are realized, this would provide Turkey a big benefit in relation to Europe.

Turkey has a good position in energy politics given its projects and developments. It is an ascendant power in the region due to its deliberative policies and moves. When the picture is analyzed, it is certain that Turkey is eager to construct new pipelines and expansion of the existent ones. Moreover, as a country, it has the power to realize its desires. Turkey monitored European export and import debit and began to create new projects in accordance with these debits. For that reason, it has become an important and a critical actor in European energy politics.

Finally, the importance of Turkey in European energy security is also related to political reasons, unrelated to energy. For instance, it is a generally-held desire to keep Russia from becoming a hegemon on energy issues in the region, it is hope that Iran will be isolated and Western Europe wants to strengthen some countries by using energy leverage. Firstly, the USA gives importance on the containment of Russia and making Russia weaker. After the Cold War, the USA worked to decrease the Russian hegemony on Caucasus and Central Asia, and rendering those countries independent. Moreover, the EU held the same beliefs. On

[205]Arzu Celalifer Ekinci, '_ran – Türkiye Enerji _sbirligi', *USAK Bilgi Notları*, Uluslararası Stratejik Arastırmalar Kurumu, Ankara, Kasım 2008.

the other hand, Russia uses energy (oil and natural gas) as a tool in order to control those regions and create a system similar to that of the Soviet Union. Some of those countries are dependent on Russia as an importer; some of them are dependent on Russia for selling their energy resources to the other countries. [206] Their energy lines go through Russian territory as a result of the ex-Soviet system. For example, Azerbaijan, Kazakhstan, Armenia and Turkmenistan had exported their energy resources only by way of Russia. This situation gave Russia both political and economic advantages. In particular, oil and gas are the critical source of income for Azerbaijan and Kazakhstan; so Russia holds great power and influence over these two countries. In order to cast aside this situation, the USA has tried to find a different energy route for Russia. By this way, those countries would not be dependent on Russia and become more uncommitted. For instance, BTC pipeline and the later constructed Azerbaijan pipeline have a big role on Azerbaijan because now, the country is not as dependent on Russia. If Kazakhstan and Turkmenistan follow the same path, this situation will affect regional policies. Due to this, Turkey will be the biggest partner of the USA and the EU. In order to regulate regional power balance and integrate Turkic Republics to Europe and the USA via energy, Turkey has a big role; and there is no other country in the same position as Turkey.

In the same way, the USA has other policies regarding the Middle East, which affects the EU energy politics. As it is known, the USA occupied Iraq and this has made the country unstable. The USA seems to supports pipelines from this region passing through Turkey in order to get to Europe. Nonetheless, the USA uses energy resources as a tool to punish and isolate Iran. Like the USA, the EU also supports that Turkey should be close to the countries in the region except Iran, since in this way; alternative energy resources can be developed. Considering all of these political moves, Turkey again becomes an irreplaceable partner in the region for the USA and Europe.

3.5.1. Pipelines in Turkey

It is questioned whether Turkey can become the EU's fourth artery, relying on the implementation of different projects which are designed to bring gas to Turkey, and then transport the gas from Turkey and increase the capacity of Turkey. This is undoubtedly what Turkey wants and Turkey has a major important pipeline that can be used to ferry gas to

[206] Adam N. Stulberg, Well-Oiled Diplomacy, Strategic Manipulation and Russia's Energy Statecraft in Eurasia, (Albany: StateUniversity of New York, 2007).

European markets beyond Turkey in a timely manner. It is the 20 bcm/Y capacity Tabriz-Erzurum line that opened in December 2001. It now carries Iranian gas to Ankara and other parts of Turkey. Moreover, along with BP, Statoil, and other developers of Azerbaijan's big Shakh Deniz field, it has moved on to build the $ 1bn South Caucasus Gas Pipeline from Baku to a connection with its own East-West Main Trunk Pipeline at Erzurum. The Baku-Erzurum line will firstly have a capacity around 7-8 bcm/y. Additionally, it is designed to expand up to 16 bcm/y. However, Turkey's ability is in importing gas from its neighbors, especially considering subsequent transit of that gas to markets into Europe, and is not restricted to Iran and Azerbaijan in order to do so.

There are currently 8 pipelines that operate throughout Turkey carrying oil and natural gas. In addition to these pipelines, there are pipelines which are in the construction phase, and are under projection.[207] The most important pipelines could be listed as;

3.5.1.1.Kirkuk-Ceyhan oil pipeline: It is the Iraq-Turkey crude oil pipeline, the largest one in Iraq. It is predicted that it will carry 1.6 mb/d but due to attacks and intervals it has not happened. It is 970 km long and it was commissioned in 1970.

Map 3.3: Kirkuk-Ceyhan Pipeline

3.5.1.2. Baku-Tblisi-Ceyhan(BTC) oil pipeline: The BTC pipeline was inaugurated in July 13th, 2006. The aim of the project is to carry mainly Azeri oil but also other oil reserves in the region to Ceyhan. From Ceyhan, the Caspian oil will reach the world markets. The total length of the pipeline is 1.075 km and it is commissioned to carry 1mb/d.[208]

[207]Yılmaz, N. Fazıl, 2005,Petrol ve Doğalgaz Boru Hatları Üzerine Genel Bir Değerlendirme, Tesisat Mühendisliği Dergisi, Sayı:87, s.4-14.
208 www.btc.com.tr.

Map 3.4: BTC Oil Pipeline

3.5.1.3. Baku-Tblisi-Erzurum(BTE) gas pipeline: The BTE pipeline is also known as the South Caucasus Pipeline. This pipeline runs parallel to the BTC pipeline but it carries Caspian gas extracted from the Shah Deniz field. It is 691 km long and at the moment it carries 8 bcm of gas but is expected to carry 20 bcm of gas by 2020.[209][210]

Map 3.5: Baku-Tblisi-Ceyhan Pipeline

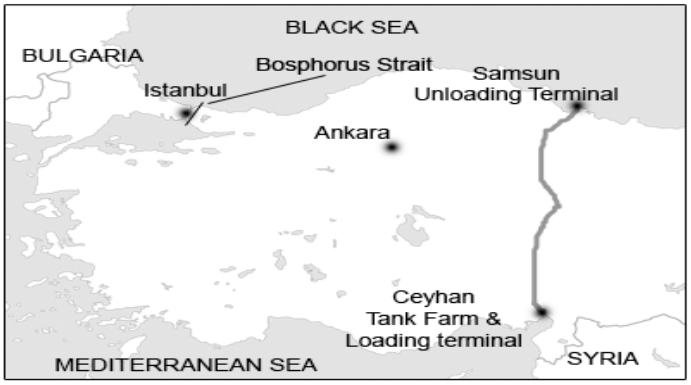
3.5.1.4. Blue Stream pipeline: This pipeline carries Russian gas under the Black Sea to the Turkish coast. It is 1.213 km long and it is expected to carry 16 bcm of gas from Beregovaya in Russia to Durusu terminal in Turkey. [211]

209Muftuler-Baç, Meltem, Deniz Başkan. "The Future of Energy Security for Europe: Turkey's Role as an Energy Corridor". Middle Eastern Studies. Vol.47, No.2, 2011. p. 361-378.
210http://www.bp.com/sectiongenericarticle.do?categoryId=9006670&contentId=7015095
211http://www.offshore-technology.com/projects/blue_stream/.

Map 3.6: Blue Stream Pipeline

3.5.1.5. Samsun-Ceyhan pipeline (SCP): It is also known as the Trans-Anatolian pipeline, the SCP is not constructed yet, it is predicted to start in 2012. The main goal of the SCP is a crude oil pipeline intended to carry Mediterranean oil to the Black Sea region. It will be 550 km length and at most it is expected to carry 1.5 mb/d.

Map 3.7: Samsun – Ceyhan Pipeline

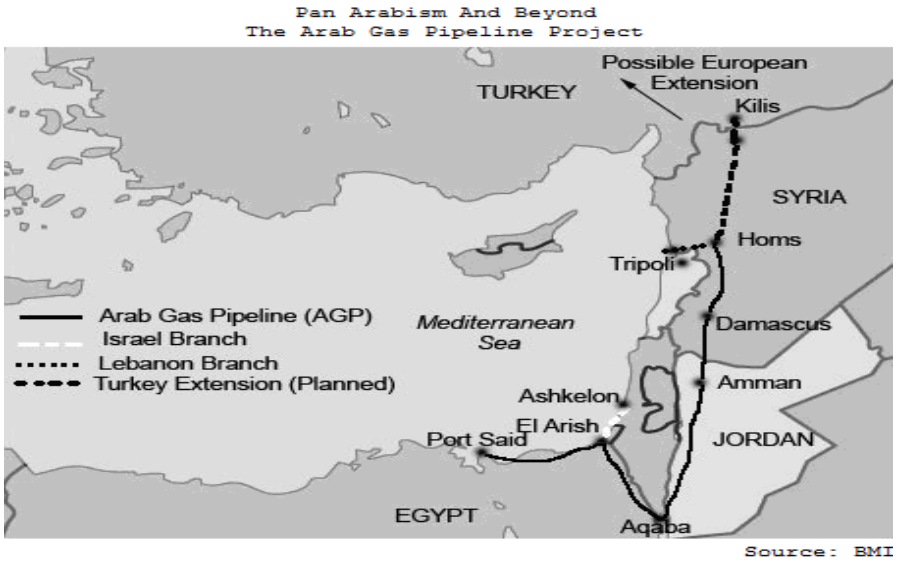


3.5.1.6. Tabriz-Ankara pipeline: It is the one of the most controversial pipelines. It begins in Iran and carries Iranian gas to Turkey. It is very long,at 2.577 km. It has never reached full capacity due to several interruptions due to terrorist attacks but if it were to function at full capacity, it could carry 14 bcm of gas.

3.5.1.7. Turkey-Greece pipeline (interconnector): This pipeline is 296 km long and it begins in Karacabey, Turkey to Komotini, Greece. The full capacity of the pipeline is 11 bcm of gas. This is a step in fulfilling Europe's target of diversification of the energy supplies because it does not carry Russian gas and does not bypass the Ukraine territory.

3.5.1.8. Arab gas pipeline: The Arab gas pipeline is 1.200 km long and it runs from the Jordanian-Syrian border to the Al Rayan gas gathering station in the area of Homs. That is to say it carries Egyptian gas to Syria, Jordan and Lebanon. It operates in the Middle East. This pipeline is planned to connect to the Nabucco pipeline and Turkey will get 2-4 bcm of gas from this connection. On January 2008 an agreement was reached to build 63 km long pipeline from Aleppo to Kilis. This pipeline is also subject to terrorist attacks, hence it is not fully reliable.

Map 3.8: Arab Gas Pipeline



3.5.1.9. Nabucco Pipeline

Nabucco is the biggest project that shows cases European energy security and diversification of the energy resources. The project puts into practicethe agreement signed in Ankara on 13 July 2009. This project supported by the USA and the EU will pass through Turkey and is composed of 3300 km long pipelines net.[212] There are many associates in this project: BOTAŞ AŞ, Bulgarian Energy Holding EAD, MOL Plc, OMV Gas& Power GmbH, RWE AG and TRANSGAZ SA. It is estimated that this pipeline will begin from the borders of Georgia and Iran and finish at Austria (Baumgarten). The gas carried per year is predicted to be 31bcm and the cost of is estimated at 7.9 billion euro.

[212]Bülent Aras & Emre _seri, 'The Nabucco Natural Gas Pipeline: From Opera to Reality', SETA Policy Brief, No: 34, Temmuz 2009.

Map 3.8: The Nabucco Pipeline

Nabucco's 2009 Bucharest Declaration states the diversification of resources as the main aim of Nabucco. [213] Diversification of resources is important for the project because this way, the energy markets will become safer, transparent, predictable, and sustainable. If it works as thought, the project will be advantageous for producer, consumer and transit countries. Additionally, the project is compatible with the EU energy politics since the EU wants energy corridor to Middle East, Caucasus, and Central Asia.

The project aims to take gas from Kazakhstan, Azerbaijan, Turkmenistan, Iran, Iraq and Egypt according to Nabucco's operational director. The first problem with this goal is that whether the gas would fill the Azerbaijan's pipelines or not cannot be estimated. Especially, if Turkmenistan gas is raised doubts, Azerbaijan gas will probably be below capacity. Nabucco operational director Reihard Mitschek (2009) states that

> "The construction will start 2010, and the first gas will carry in 2013. The amount of gas carried in 2013-2014 is about 8-10 billion cubic meters. This amount will increase step by step to 31 billion cubic meters. It means that in the short term, there no gas or investment expectation from Turkmenistan. Energy projects are long term projects, not short term ones. Therefore, we believe that we have good reasons to wait gas from Turkmenistan to Europe through Nabucco." [214]

However, the Nabucco project is looking as fading away, due to the immediate reaction came from Azerbaijan which proposed the TANAP connection instead of Nabucco in which Turkey becomes the only partner with 20 percent share. The pipeline will be

[213] Taken from: www.bilgesam.org/tr/images/stories/sunular/avrpenertk.ppt
[214] 'Nabucco Official Says EU Very Supportive of Pipeline Project', Radio Free Europe/Radio Liberty, 17 Ocak 2009.

designed to run directly from Baku to the Bulgarian border.[215] How this gas will be carried to the rest of Europe from the Bulgarian border is not decided yet. Therefore, the future of Nabucco is now in difficulty.

3.6. Conclusion

Turkey is not a natural gas rich country, but it is situated in between energy producers who are holding crucial volumes of natural gas. As noted, world's 71.8 percent of proven gas reserves and 72.7 percent of proven oil reserves are located around Turkey.[216]On the other side, the EU that is one of the biggest energy consumer in the world sitates in the west. Therefore, Turkey is expected to play the key role of an energy hub and a corridor between the supplier countries and the consumer countries.

Turkey is well-situated for a potential transit country between the world's major suppliers and the major consumers of natural gas. In addition, the curremt and potential pipelines mentioned in the previous section put Turkey in a really good place as an energy hub. Therefore, the EU and the U.S. support Turkey's desire as becoming the "fourth artery" to the EU. Still, there are some challenges with regards to its important role. Due to its location as a bridge between Europe that has a rich consumer market and the major supplier countries, Turkey should know the interests of other countries in its periphery. Moreover, it must realize the strategies and the policies of those countries, then Turkey should form its own effective strategy based.

To conclude, considering the geographical situation of Turkey, it is well situated for accommodating the pipeline connections from the East and South to the West. Turkey is one of the major developing economies in the world, so it looks like a reliable country for transit.

3.7. Turkey's role on Energy Security: An Added Value for Full Membership?

The future of Turkey in the European Union has been intensely debated by both Europe and Turkey for a long time. It has been nearly 53years since Turkey applied for European Union membership, and the candidacy process is still going on. After Turkey applied to the EU, the EU continued to enlarge. In 2004 alone, it accepted 10 new members to the union. From this point, it looks as Turkey is excluded from the future of the EU. However, this is short-sighted, since Turkey is the only candidate country that has completed the Customs Union with the EU. Moreover, the geopolitical location of Turkey and the role of Turkey as an energy corridor for Europe should put Turkey at the top of the agenda. This

[215] Nicolo Sartori, "The European Commission's Policy Towards the Southern Gas Corridor: Between National Interests and Economic Fundamentals", Istituto Affari Internazionali, 1 Jan 2012.
[216] Roberts, op. cit.

is only one of the concerns; Turkey would still act as an energy corridor for the EU without membership.

Actually, integration of Turkish gas market to the EU would be an important topic in accession negotiations, since Turkey thinks that energy cooperation with the EU would be a contribution to the negotiations. Commission President Barosso stated "Turkey can in fact be something that is the interest of all European citizens: Good cooperation on energy matters."[217] From this statement, it can be argued that the EU may link the energy cooperation with membership. The European energy commissioner Günther Oettinger said in the "Quartet Meeting in İstanbul: "Turkey holds significant importance for Europe's energy security due to its geographical positioning and regional roles. Looking at the map, we can see that Turkey plays a significant role in energy security." He added that "We have talked on plans for increasing the inter-consecutiveness of Turkey with the countries in the region and Turkey's neighbors to compensate the need in case of a problem in any other supplier."[218]

These kinds of strategies related to the energy cooperation bring mutual economic benefits to both sides. Therefore, opening of energy chapter to negotiations may bring an important momentum with regards to further alignment of EU internal gas market with Turkey. Actually, it should not be forgotten that Turkey is not only a transit way, but it's also a gas terminal and an important part of EU internal gas market. Therefore, Turkey has a high demand growth potential structure, good supply geography, infrastructure and a transmission route. With regards to Turkey-EU cooperation, the establishment of the Trans-European Energy Networks is a good step in order to meet energy security. For future energy security and diversity of energy supplies, energy issues between Turkey and the EU become the top topic of EU-Turkey relations. Actually, this issue is directly related to EU external trade as well as foreign and security policy making, since energy is the internal framework of these policies. Moreover, these can be important energy policy tools to meet future security of supply. Turkey, in that sense, is a potential country to become an important player for oil and gas transit from Russia, the Caspian Sea region, and the Persian Gulf. With this role, Turkey gains strategic importance for the union. Moreover, Turkey also connects the EU with the Middle East and it currently holds the same role that the Mediterranean used to hold. For that

[217]"Energy pushes Turkey and EU closer", 9 January 2009. http://www.nytimes.com/2009/01/19/world/europe/19iht-turkey.4.19499151.html, (20 February 2009), p.1
[218]Turkey vital for energy, EU Commissioner says, Turkish Daily News. http://www.hurriyetdailynews.com/turkey-vital-for-energy-eu-commissioner-says.aspx?pageID=238&nid=13451

reason, political- strategic considerations play a critical part in Turkish future membership and closer relations with the EU.

The weaknesses of EU external energy policy together with the Europe's import dependency on Russia are the main challenges for EU policy makers. Russia wants to deepen this weakness through bilateral gas agreements with major European consuming countries such as Germany, France, Italy, Netherlands and Belgium; if this addiction continues, Russia could strengthen its position further by imposing its conditions on future gas negotiations and keeping an EU common energy policy at bay. Turkey looks as if it strengthens its position as a new gas artery between resource-rich regions and Europe. Some oil and gas pipelines have already been finished and operate successfully whereas some of them are waiting to be finished. The important thing is that Turkey has been in ongoing negotiations with the EU for full membership and this can be an impetus for further and deeper cooperation between Turkey and the EU on energy matters. Moreover, recent reform process on gas and electricity sectors in Turkey is a point in Turkey's favor and this situation signals that the Turkish energy market is on its way for integration with EU internal market. This development can be a great basis for Turkey's aim to become an energy hub integrated within the EU market. These improvements are the starting point for any long term cooperation between Turkey and the EU, since a well- functioning energy market in Turkey would give the EU necessary reliable and liquid market conditions that also serve as a guarantee for energy security.

CONCLUSION

Energy is an important subject for the EU. It makes the energy security vital for the Union. The EU's energy consumption, specifically natural gas, is expected to increase, however the natural gas production levels are declining dramatically and the proven natural gas reserves in the EU are diminishing. The growing demand and decreasing production make the import volumes and import dependence of the EU rise. Oil and gas crisis showed the importance of energy security and supply security. The energy and supply security topics are more considered by the EU in several policy objectives. The EU wants the diversification of the suppliers and the supply routes as the most important steps to enhance its supply security.

This thesis aimed to analyze European energy security starting from the European Coal and Steel Community to today and the role of Turkey in this issue whether it is critical for the EU. The conclusion to be drawn from this thesis on a general framework is that the role of Turkey in the European energy security is important; however it is not enough to guarantee Turkish membership, because the EU has an intergovernmental framework and member states' preferences affect the EU decision mechanism. In the same way, concerns about energy issues vary among member states, so their national preferences are very important.

In order to support this argument, firstly, the history of European energy security is focused on. In today's international politics, energy security becomes critical, since the dependency on energy resources is increasing, but countries that have energy resources are very limited. One of these countries is Russia which also uses its energy resource advantages as a political instrument. The EU is one of the main energy importers from Russia, so this issue is very critical for the EU too. Especially with the Eastern enlargement, relations with Russia gain new momentum. That is to say, European energy security becomes a very important concern for the Union. The Union does not have a common energy policy and because of the different perceptions of member states creating a common energy policy has proven difficult. However, the EU should take a common position on energy security, because this situation makes the Union more fragile.

Secondly, the preferences of selected member states were mentioned in order to explain why the EU has had difficulty acting as a unified body in energy issue. In order to explain this clearly, intergovernmentalists theory was applied. Intergovernmentalism, which

is the state-centric perspective that can serve as a successful background to understand attitudes of member states. In the intergovernmentalist view, Moravcsik (1991) argued for‘intergovernmental institutionalism’, where he emphasized the role of domestic politics inthe changing interests of states. That is to say, concerning this theory, three big powers of the Union, Germany, France and the UK were studied first. Then, select Central EasternEuropean Countries were observed with the selected indicators, since their preferences could vary due to Russia and their Soviet history.

Thirdly, the role of Turkey in the European Energy Security was analyzed, since this role is important for both the Union and Turkey. From the EU point of view, energy issue has some challenges because of security of supply problem and Russia. Instead, Turkey is like a dividing line between Russia and the EU, because its geographical location and historical ties with the other supplier countries are a benefit for the Union. Turkey has a crucial role as a gateway through which natural gas can be transported to the European Union. This role is becoming increasingly critical as the European Union faces the interrelated problems of ensuring energy security and the provision of energy supplies from multiple sources at competitive prices. Beside this, Turkey is a net energy importer itself and a major market for regional producers; Turkey has the ability and willingness to improve major transit systems for gas as well as oil, therefore its role starts to be important as a country enabling hydrocarbon resources to access European markets by pipeline from such diverse regions as the Caspian, Central Asia, the Gulf, and the Eastern Mediterranean.

Considering the current and projected pipelines passing fromTurkey, Turkey has a critical role and its role will increase through the time, since these pipelines will pass through Turkey. Additionally, this role might increase the chance of Turley to become a member state of the EU. In other words this role can be an added value. The future of Turkey in the EU has been debated in both Europe and Turkey for a long time. It has been nearly 53years since Turkey applied for European Union membership, and the candidacy process still continues. The geopolitical location of Turkey and the role of Turkey as an energy corridor of Europe put Turkey at the top of the agenda. This is only one of the concerns; Turkey would still act as an energy corridor for the EU without membership. New improvements in Turkey can be the signal for the starting point for any long term cooperation between Turkey and the EU, since a well- functioning energy market in Turkey would give the EU the necessary reliable and liquid market conditions that also serve as a guarantee for energy security.

About the future of European energy security it can be said that recent events and developments show that expectations are high and the EU needs to be clear about what it can

do with regard to energy policy and energy security. It always emphasized the importance of common action, so the Union has to find solutions to preserve energy security. As it is underlined above, especially energy dependency on Russia is a big problem for the Union and member states. The concerns became more prescient in light of past energy crises.

Being one of the major emerging economies in the world, Turkey looks to be like a reliable country for transit. However, there are ofcourse several challenges undermining the viability of Turkey's possible role of a transit country. For instance, the domestic demand is projected to rise at a considerable level in the future. In this respect, it is highly questionable whether there will be enough gas to transport to Europe if the current trends continue in Turkey. It can be said that it is hard to project Turkey's long-term role as a transit state. It is dependent on many different external and internal factors. In short, Turkey now can be a transit country with the transition of Azeri gas until the Bulgarian border via the TANAP project. However, in the long term, when the projects are realized, the role will increase. Therefore, Turkey will keep its critical role as a transit country.

Between these conflicted points, the EU must achieve to develop an effective toolbox to deal with the energy security. If it could succeed to deal with this issue, its future will be guaranteed in the energy security process. Turkey should use its advantages related to energy security, and it could become a key country for the EU if it uses this as an added value. Within the existing dynamics, while it is not yet a reality, there is a very real possibility that these goals could be realized. In order to achieve this, both sides should make some efforts and then, they can both benefit fully from their relations in the future.

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