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To my parents,

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ÖZET

Bu çalışmanın öncelikli amacı Avrupa'daki büyük ülkelerinin enerji politikalarının uluslararası siyasetin sistemsel etkilerinden ne derece etkilendiğini ve Türkiye'nin Avrupa'nın enerji güvenliği üzerinde ne derece etkisinin olduğunu ortaya çıkarmaktır. Bu amaç doğrultusunda tez neo-realist bir yaklaşım kullanmakta ve uluslararası sistemin tek kutuplu yapısının Avrupa'nın büyük devletlerinin dış politika ve enerji politika davranışlarını soğuk savaşın bitiminden beri etkilemekte olduğunu tartışmaktadır. Tez ayrıca Türkiye'nin Avrupa'nın enerji güvenliğini sağlamadaki rolünün çok önemli fakat tek başına yeterli olmadığını da tartışmaktadır.

Çalışmanın ilk bölümü neo-realizmle ilgili var olan kaynakların incelenmesi yoluyla teorik çerçeveyi oluşturmaktadır. İkinci ve üçüncü bölümler sırasıyla Avrupa Birliği ile büyük üye ülkelerinin ve Türkiye'nin enerji görünümünü ele almakta ve enerji politikalarını değerlendirmektedir. Son bölümde, Avrupa'nın büyük devletlerinin enerji güvenliği konusu komşu bulunan enerji bölgeleri ve küresel güç dengesi çerçevesinde ele alınmaktadır.

Sonuç olarak, bu çalışma AB'nin büyük üyeleri için enerji güvenliğinin çok kritik bir konu olduğunu ve Avrupa ile potansiyel enerji sağlayıcıları arasında bulunan Türkiye'nin de Avrupa ülkelerinin enerji güvenliğini sağlamada stratejik bir role sahip olduğunu ileri sürmektedir.

ABSTRACT

The foremost aim of the present study is to find out what extent the energy security policies of the major European countries are affected by the systemic imperatives of international politics, and to what extent Turkey has an impact on energy security of Europe. To realize this aim, this study applies a neo-realist approach and argues that the uni-polar structure of the international system has changed the foreign policy and energy policy behaviors of major European powers since the end of the Cold-War. The thesis also argues that Turkey's role in providing European energy security is crucial yet not decisive on its own.

The first chapter defines the theoretical framework by examining the existing literature on neo-realism. The second and third chapters examine the energy outlook and evalute energy policies of the EU and its major member states and Turkey, respectively. In the final chapter, the energy secuirty of major European powers is analyzed with respect to neighbouring energy areas as well as the global balance of power.

To conclude, this study maintains that energy security is a very critical issue for the major EU member states and Turkey has a strategic role in their energy security since the country is located in between Europe and its potential energy suppliers.

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INTRODUCTION

The end of the Cold War paved the way to a new political order at global level. Most of the actors have begun to play new roles with the evolving structure of the system. The Soviet Union collapsed while its former enemy emerged as the sole superpower. However, new balances have begun to form a new structure. The Russian Federation has risen from the ruins of Soviet Union while China, India, Brazil and some other regional powers have emerged as new powerful actors. The smaller actors have also defined new policies in order to survive within the newly shaping structure of international politics. As a prominent example, the Eastern European Countries engaged in a process of accession to the EU and have become part of the European integration. Consequently, new forms of regionalist movements emerged as a counter-balance to the impact of globalization.

One of the most prominent historical developments of this period is the European integration process. The Union has engaged both in a process of enlargement and deepening. The Maastricht Treaty brought the full implementation of single market among the Member States in 1992, and was followed by the accession of Austria, Sweden and Finland in 1995. During the 1990s, the European integration process has witnessed severe structural changes not only in the pillar of EEC but also in the areas of Common Foreign and Security Policy (CFSP) and cooperation in Justice and Home Affairs (JHA). The Amsterdam and Nice Treaties were signed in order to provide harmonization of the Union in a more integrated and enlarged Europe. The consequences of these efforts were the enlargement of 10 new member states in 2004 followed by further enlargement of Bulgaria and Romania in 2007. The problems that some member states confronted during the ratification of a proposed European

Constitution in 2003 has been avoided by the Lisbon Treaty, which envisages new institutions and a new system to the Union with its enlarged member state structure. By this way, the EU expects a more active and coherent position in order to cope with the current developments in world politics.

The September 11 events, on the other hand, have drastically changed the geo-political calculations of all international actors. Regardless of the decisions of international community and the United Nations the American invasion of Afghanistan which was followed by Iraq depicted that the unilateralism and the U.S. search for hegemony reached its peak point. The Europeans reacted these developments by issuing a European Security Strategy (ESS), in which the threat perceptions of the EU is generally drawn. According to the ESS, "terrorism, proliferation of weapons of mass destruction, regional conflicts, state failure and organized crime are the main threats"[1]. Therefore, different from the U.S., the Union's main threat perceptions do not include direct or indirect economic concerns. Although, the Member States have currently retained competence in the field of foreign policy and security, important steps has been taken at the EU level after the September 11 events. Yet, the member states have still retained policies in favor of their national interests.

Energy Issues in a Changing World

The globalization has brought more liberalism in trade, therefore economic concerns have often turned as a determinant of political issues of international actors. As an economic giant, the EU has used economics as a tool in its foreign relations. However, EU's ability to implement a unique policy is considerably very restricted. On the other hand, the bigger members of the EU are eager to have an active role in international politics, thus the European Security Strategy mentions EU's global actorness for several times. According to many analysts, therefore, the Union is in need of developing more assertive political and military initiatives equivalent to its global economic potential and capabilities of the member states. In that sense, by their growing roles in international arena, China, India, Japan and Russia are important actors that may affect the global role of the EU besides the United States.

[1] Solana, Javier, 2003, "A Secure Europe in a Better World – European Security Strategy", *Document Adopted at the European Council*, Brussels. For a detailed analysis of this document, see: Cebeci, Münevver, 2004, "European Security Strategy: A Reflection of EU's Security Identity?", *Marmara Journal of European Studies*, Vol. 12, No: 1-2.

As an indispensable element of economics, issues of energy take a pivotal role within the political agenda of the main international actors. For some analysts, the American invasion of Afghanistan and Iraq has been attached to the ambition for the control of energy resources by the hegemon. Moreover, the economies of some emerging powers such as China or India are severely in need of the scarce energy resources. Put differently, the energy resources will certainly be very important for major powers in a world of multi-polarity because energy resources constitute an important part of internal efforts to provide the balance of power in international system.

On the supply side, the former Soviet Republics of the Central Asia as well as the Middle Eastern resources seem to be the most appropriate way to solve the energy demand for all major international actors. Particularly, the Russian Federation emerged as an important energy supplier of natural gas and oil. However, the recent energy crisis between Russia and Ukraine about the transfer of gas to Europe which was followed by a similar crisis with Belarus has depicted that relying solely on Russian resources would be a problematic. Therefore, diversification of suppliers as well as energy mix of a country has become an important foreign policy objective of all major powers. In that respect, China increased its presence in Sudan, while the Europeans increased their efforts in Caspian basin and to a limited extent in Iran.

European Energy Policy

In line with the developments mentioned above, providing energy security has been an absolutely necessary part of EU's global actorness. EU is the biggest energy consumer after U.S. with 16 percent of the world total energy demand. Around 50 percent of the EU energy demand is dependent on imported resources. Furthermore, this amount is expected to increase more than 20 percent in the next 30 years.

On the other hand, the internal energy resources of member states are not only very limited, but also have a high marginal cost of production. The Norwegian resources, which have contributed to the energy supply of the continent more than three decades, are dwindling. Similarly, more than half of the North Sea reserves have also been extracted and those resources will be exhausted in the near future.

From the demand side, oil and gas are the main resources of energy for most of the EU economies. Approximately 65 percent of the total energy demand is supplied by oil and gas,

half of which are imported from foreign countries. In that sense, gas and oil imports are heavily dependent on different suppliers. Among them, Russian Federation and the Middle Eastern Countries are the main suppliers of the EU member states. Some African countries as well as Latin American members of OPEC are also contributing the energy supply of the Europe. However, the primary supplier of the leading EU members is Russia.

In light of this, energy supply emerges as a vitally important question for the Union and for its ability to play a global role. In order to provide energy security, the EU tries to implement several solutions. According to the European Commission, the main agenda item is the diversification of energy resources. This diversification process has two sides: (1) diversification of the type of resource; (2) diversification of the origin of hydro-carbon resources. Considering the first one, the EU has taken important steps particularly after the oil-crisis of 1970s. Different member states preferred different ways of solution for this problem. For example, France has followed a policy of nuclear energy which contributes more than 40 percent of its energy demand at the moment. Similarly, Germany has long been engaged in huge investments on clean energy and renewable resources.

On the other hand, diversification of suppliers has still poses problems to the economies of member states. As mentioned above, the Union has already been heavily dependent on Russian supplies particularly when the natural gas is concerned. This is almost the same for the oil supplies. However, the easier transportation of oil makes Europe less dependent on Russia as far as oil is considered. The ratio that Russian gas supplies alone is about 45 percent of the total gas supply. The European Commission, however, tries to limit the amount of import from non-EU countries to a maximum of 30 percent of total energy supply in order to increase energy security at Union level. Therefore, the member states are searching for alternative ways of achieving the diversification of suppliers.

In that sense, several alternatives to Russian gas are available for the EU members. Caspian Region, North African and Latin American gas resources can easily be mentioned among some distinctive alternatives to the Russian supplies. However, in a world of global competition, the cost of energy has become an important element of energy security as it is clearly mentioned by the European Commission. The transportation of oil can provide a benefit for the buyers. On the other hand, natural gas is a quite different commodity when compared to oil. As for the gas, ‘the closer the cheaper’ is the main trade principle. Natural gas can also be transferred via vessels in the form of LNG. However, this liquefaction and re-

gasification processes are lengthy and entails extra costs on the consumers. Therefore, the most viable solution for European energy demand is to have a more intensified relationship with the surrounding energy rich regions: the Middle East, Caspian and the Central Asian Countries. In doing so, it should be reminded that trade and economic concerns are not the only determinants of policy choices in energy security. The impact of system structure on the decisions of states is also worth to consider as neo-realism argues. States sometimes do not prefer the most optimum alternative when their security concerns outweigh energy issues. Baku-Tbilisi-Ceyhan (BTC) Pipeline is an obvious example for understanding the role of international political system on energy policy, which has become an important part of foreign policy. From this point of view, it is necessary to comprehend the current structure of international political system as well as positioning of European actors within the system in order to understand the formation of energy policy at European level.

Turkey's Role in European Energy Supply

The continental Europe has surrounded by several energy islands. From Norway and North Sea to Russia, from North Africa to the Middle East and the Caspian, the continent has a very energy rich neighborhood. The direct energy lines from the north and from Russia have a long history. A similar situation is relevant for the southern energy lines. The North African resources are transferred to the continent via pipelines or in the form of LNG. However, Middle East, Caspian and Central Asian are different from other neighborhoods as far as energy resources are considered. There is no direct link between these areas and European energy grid. As for the oil, the question is not complicated because oil can be transported to the European markets by tankers. However, natural gas requires long distance pipelines from the source of the gas to the market. Gas from the Middle East can be either transferred via a new sub-Mediterranean pipeline or through Turkey. For the Caspian and Central Asian gas, on the other hand, there are two alternatives: via Turkey or via Russia.

From this point of view, Turkey, as an energy hub rather than a transit country, has become an important player in energy politics. The importance of the country seems to be growing in an accelerating pace. In that sense, Turkey's role may be evaluated from two different perspectives: Firstly, Turkey is a rapidly growing oil and gas market as a growing economy. Secondly, but more importantly, Turkey is geographically located in a position which enables the country to play the role of a hub between the gas and oil resources and consumer countries.

As far as Turkish market is considered, oil and gas constitutes a huge part of Turkey's energy demand. Almost 90 percent of the oil demand is imported from external sources. On the other hand, the gas consumption is steadily growing particularly in the last two decades. Russia has become the main supplier of Turkish gas market. However, most of the analysts assume that relying solely on Russian supplies would be insufficient and risky for Turkey. In order to diminish dependency, Turkey has promoted special trade relations with Iran. Although there are certain gas shortages in trade, this relationship brought Turkey leverage in its relations with other suppliers. Furthermore, in the long-term, Caspian and Central Asian gas resources will probably present Turkey alternatives to the Russian gas.

The second perspective for Turkey's role is much more important than the first one. Turkey has a pivotal role as a transit country between energy resources and energy demanding countries. Turkey is located not only on the way of the Caspian and Central Asian energy routes, but also the supplies of Iran, Gulf and Middle East Countries. Therefore, as long as the European countries seeks for alternative gas and oil resources in order to be released from problems derived from unreliable Russian energy policies, Turkey may probably be one of the key elements of European energy policy. Therefore, Turkey has an important role in European energy policy. From this point of view, it is also necessary to evaluate the positioning of Turkey within the international political system for understanding the impact of Turkey's energy policies on European energy question.

Research Question and Methodology

In light of this preliminary information, the primary research question of the thesis aims to find out to what extent the energy security policies of the EU member states are affected by the systemic imperatives of international politics and to what extent Turkey has an impact on energy security of Europe. In other words, this study tries to focus on energy policies of European actors and Turkey from a neo-realist perspective by examining the interplay between energy security concerns of European states and the structure of international politics.

The current uni-polar structure of international system depicts a transition to poly-centric feature which is characterized by the rise of some other major powers to the detriment of the hegemonic power. Put it differently, the transition of international politics has not been finally shaped since the end of cold war. The economic growth of some other major powers causes

inclination towards multi-polarity in economic terms, which may also give way to multi-polarity in military terms. Currently, the system's structure still shows ambiguity, which makes it difficult to evaluate the actor behaviors. The behaviors of European powers and Turkey, in that sense, should be evaluated from a perspective of a structural analysis.

Major European powers engaged in an integration process which gives a veto power to smaller states while the major powers have more say in decision making. The Commission also shows a unique characteristic with an increasing power in decision making over the national governments. However, the structure of international system still affects the decisions of individual member states although there is currently a strong effort for uniting the Europe. An analysis of Union's energy policies in general and energy policies of EU member states in particular clearly supports the arguments put forward by neo-realist writers. EU cannot form a common energy policy and cannot shape its foreign policy accordingly because the major European powers tend to manage their own energy policies regardless of the common benefit of the other member states. Since major powers shape their energy security and foreign policies according to their own agenda and the new structural imperatives of the international political system, the EU institutions cannot be able to form a common energy policy. This confirms that systemic pressures on foreign policy and energy policy decisions are at work. Therefore, the thesis argues that the uni-polar structure of the international system has changed the foreign policies of major European powers as well as their energy policies during the post-Cold War period.

In line with the internal dynamics among European powers, the end of Cold War has a formative impact on transatlantic relations. Although both sides of the Atlantic do not perceive the other as a threat, the lack of a common enemy and differences of threat perception in current global political order caused loss of coordination among former close allies. The European efforts for forming its own military power, direct and open opposition to certain US policies, and engaging intensive relations with other major powers should not be evaluated as a balancing activity, but rather as a lack of convergence of interests among members of western alliance. However, these activities of European states may, in turn, be fruitful for the countries that engage balancing against the US. It should clearly be noted that this does not mean that Europe is balancing, but rather as Europeans efforts to highlight their primary interests which are not congruent with the US interests.

The thesis also questions whether Turkey's role in international structure and its activities in energy politics have an impact on energy policies of EU members. Since Turkey is geographically located between energy consuming European countries and oil and gas rich energy producing countries, Turkey's role in providing European energy security has become a current debate. On the one hand, Turkey has a long history of membership to the European integration process. As a candidate country, Turkey adopted most of the EU norms to its internal political system as if the country is a member state. However, certain activities of anti-Turkish lobbies in Europe also discourage Turkey's future plans about the Union. In that sense, the changes in the system's structure also affects Turkey's foreign policy and energy policy decisions, which in turn have a direct impact on European energy question.

In light of this debate, the thesis also argues that Turkey's role in providing European energy security is crucial yet not decisive on its own. Similar to European states, Turkey's energy policy and foreign policy have also been affected from systemic pressures of international politics. Different from Cold-War security understanding, Europeans are in search for cooperation with other great powers, particularly with Moscow, in order to provide their own security. Turkey also promotes special relations with Russia in order to cope with the systemic pressures. Therefore, the thesis also argues that in the absence of a security umbrella provided by a superpower as it was during the Cold War, Europe and Turkey follow a similar path in formation of their energy and security policies, which requires forming a balance among the great powers. Increased cooperation with Russia, however, is not sufficient in an anarchic world since Russia is also not completely trustworthy. Thus, alternative sources gained special importance. In that sense, the thesis further argues that Turkey and Europe have to work together for providing their security in an evolving international structure. This common concern, in turn, may have a positive impact on Turkey's EU membership parallel to the structural effects of the system on energy and foreign policies of major EU countries and Turkey.

In line with these arguments, this study emphasizes that some factors are decisive in determining the impact of energy on EU-Turkey relations. These are; the policies of the United States within a unipolar structure of international system; behaviors of other major powers within the system; and Turkey's foreign policy behaviors with respect to current development in the international politics. In more concrete terms, the continuation of unipolarity and hegemonic behaviors of the U.S. is decisive in shaping European energy

policy since it also shapes foreign policies of major European countries. In addition, certain activities of Russia and China have also a direct impact on major EU member states' energy policies since China and Russia are potential competitors of Europe in an evolving international structure where Europeans should protect their interests against them. Finally, Turkey's policy priorities and relations with western world may also change the minds of European leaders about engaging long term and complicated cooperation with Turkey in energy field.

In analyzing these discussions, the theoretical framework is constructed on neo-realist premises. The study initially concentrates on the impact of foreign policy considerations on energy security decisions and vice-versa. Although energy is regarded as a totally economic issue, energy trade is different from all other economic sectors since energy has a decisive impact on military and security issues of international actors. The importance of energy resources one state possesses naturally cannot be compared to the importance of its military capabilities. Yet, it is obvious that having sufficient oil and gas reserves apparently strengthen political power of an international actor. In other words, energy resources have become an indirect subject of system analysis. Therefore, the theory chapter examines the structure of international system with respect to energy security policies of European actors. Furthermore, Turkey's perception about the distribution of power among global actors and the positioning of its foreign policy are also evaluated from an energy policy perspective. By this way, this study tries to help to identify some conclusions about how Turkey may contribute to the EU's energy security and the relation between European energy security and Turkey's membership. In other words, the study will help understand whether Turkey's energy policies are relevant with the energy strategies of the European Union members or not. The thesis strongly emphasizes that energy policies of major European countries and Turkey are in conformity because both parties are affected from structural effects. Furthermore, the accordance between energy policies of Turkey and Europe has a positive impact on EU's ability to reach various energy fields in a safe way via Turkey. Therefore, Turkey may and should be considered as an indispensable part of EU's economic and social life as well as of its emerging global actorness, which in turn, may affect Turkey's membership status.

The materials used in this study are mostly selected among primary resources. First of all, the theoretical explanations are examined with reference to original texts and books that were introduced by the leading figures of neo-realism. Secondly, information and data about energy

policies are gathered from either governmental agencies or international organizations, which are operating directly in energy politics. Last but not least, interviews with specialists and individuals working in energy sector or governmental bodies were preferred as an important source. In that respect, Jonathan Stern (Oxford Institute of Energy Studies), Heinz Kramer (SWP-Berlin), Roland Götz (an independent energy analyst) and Tuncay Babalı (Ministry of Foreign Affairs-Republic of Turkey) expressed their opinions on energy politics. Secondary resources are also used where primary resources are not available or required more sophisticated interpretation.

The thesis begins with a theoretical explanation selected for examining the energy policies. Generally international conflicts emerge as a result of struggle for power. Today, control over energy sources is an important element of power. In that sense, there is a struggle among international actors for providing energy security. Even the oil and gas exporting countries have some 'perceived vulnerabilities' as far as energy security policies are concerned. Therefore, the neo-realist theory of the international relations, which suggests a system level approach, proposes an interesting theoretical base for this study and help for explaining some aspects of the research question. As one of the most frequently used international relations theory, neo-realism seems to include all the necessary tools to evaluate energy security issues. However, there may be an inadequacy of the theory since neo-realism mostly concentrates on traditional security and military policies of actors rather than economic aspects of security. Therefore, energy security may somehow be regarded as an additional concept for the neo-realist theory, which has continuously been developed since the end of Cold War. In that sense, this thesis may be evaluated as one of the preliminary studies which introduce energy politics in the field of neo-realism. Naturally, some may argue that the relevance of energy politics into the research area of neo-realism is wide open to criticisms. Yet, this study tries to construct a link between neo-realism and energy politics.

After explaining the main neo-realist arguments, therefore, the theory chapter of this study evaluates the current structure of international system, which is assumed to be characterized as a transition period. While doing this, the study concentrates naturally on the European actors as well as Turkey by examining their positions vis-à-vis the unipolar power. It should also be noted that the European actors are evaluated from the perspective of European integration process. Put differently, the position of each major European power and the Union in general has been evaluated with their preferences in energy policy decisions. As it is shown

in further chapters of the study, examining policy preferences of member states confirms selecting neo-realist theory as a starting point.

The second part will comprise EU's energy strategies as well as the biggest four member states' energy outlook and energy perspectives. Since neo-realism is the main tool to construct the framework of this study, energy policies of great powers in international arena are unavoidably important for a prompt conclusion. From this point of view, the energy policies of Germany, France, Italy and the UK are examined in detail. The supply and demand figures are evaluated in order to understand their energy dependency. This would also give us a chance to grasp their expectations and potential energy strategies. In this part, the strategies declared by these countries based on specific governmental documents are also taken into consideration.

The following chapter is about Turkey. Turkey's energy policies and preferences are evaluated in detail. The current developments in Turkey's transit role are examined with special references to specific projects. The BTC, Southern Caucasus Pipeline and other alternative routes passing through Turkey are also taken into consideration in order to understand the capabilities of Turkey as an energy hub with respect to power configurations in a future multi-polar world. This part may also help to comprehend the energy tools that Turkey may use in its relations with the EU.

In the final chapter, the relation between energy security and international system is examined with respect to energy policies of EU member states and its energy neighborhood. Specifically, the existing three main energy corridors, namely northern corridor, Russia and North Africa are examined from a neo-realist view. To be more precise, the impact of northern corridor is explained with reference to internal struggle among major European countries to access the Norwegian gas and oil. Northern corridor, in that sense, helped to show the conformity of energy policies with neo-realist premises since all major powers prefer their own interests instead of a common benefit.

Secondly, Russian corridor is examined in order to understand the impact of structure of international system on foreign and energy policies of member states. Since the hegemonic behaviors of the U.S. irritate other international actors, some of the major European countries engage in peculiar activities that can be regarded as balancing. Strategic partnership with former Cold War enemy, Russia, is the most prominent example of these behaviors.

Therefore, the examination of the Russian corridor helps to explain the balancing behaviors of member states from a neo-realist point. In the final analysis, the insufficiency of existing energy corridors is emphasized while the fourth corridor emerges as a solution to European energy security problem. In that respect, Turkey's geostrategic position as a special actor is mentioned with respect to the energy rich areas in the Caspian, Central Asia, Iran and the Middle East. In the concluding remarks, Turkey is presented as a stabilizing factor and energy hub that can contribute not only the energy security problem of Europe, but also to the global actorness of major European countries. Without Turkey's contribution, European countries may not be able to have a decisive impact in a future multi-polar international structure. For confirming this argument, some alternatives for Turkey's role are also evaluated, yet disregarded because of inefficiency or inappropriateness of those alternatives.

To sum up, the reciprocal impact of system and European energy policy on each other is clearly confirms that neo-realist arguments prevail in foreign and energy policy decisions of European policy makers. Turkey's position, furthermore, contributes the argument in the same way. In other words, what Turkey implements in energy policy is also affected from structural effects and a proper coordination between major European capitals and Ankara could help both parties to secure themselves in a struggle for power in world formed by several great powers other than the United States. Today the United States assumes the role of unipolar power.

However, the shaping of structure is ambiguous and China, Russia, Japan, India may become great powers as neo-realists envisage. In that case, Europeans should be ready to survive in a multi-polar world, which is characterized as the most insecure condition. Despite their individual capabilities, none of the leading EU members are currently able to become a great power by their own efforts. They need to act together. In other words, their internal capabilities are not sufficient for balancing other powers. Being aware of this fact, EU members and the European Commission continuously work on proposals to form common positions in foreign and security policies. However, in most cases it becomes very difficult to achieve a unique stand. In the energy area, Europeans should not only act as a unique structure, but also provide the support of non-member states.

These non-members are energy producing and transit countries. As for the producers, Europe should be more active in the Caspian, Middle East and Iran. However, the potential great powers are also highly interested in the resources in those regions. In order to gain

advantage over China, India and others, Europe should make agreements with these countries. However, guaranteeing the suppliers' support is not enough particularly when natural gas is considered. Transit countries are vitally important as well. For transporting energy from the Caspian and the Middle East, Turkey is the most reliable and cost-effective transit country. In that sense, Europeans should not regard Turkey as simply a partner whose support and confirmation is taken for granted. Europeans should respect Turkey's energy hub role as a candidate of EU membership.

CHAPTER I

A THEORY FOR ENERGY POLITICS

1.1. Theorizing the Study

A theoretical approach is a *sine qua non* for any academic study whatever the subject matter is. For a social sciences study in general and for an international relations study in particular, a theory constitutes the framework of a study. However, unlike the applied sciences, different theoretical approaches can be utilized to explain a similar subject within the context of social sciences. For example, the European integration process can somehow be explained by a federalist approach. This does not obstruct any further effort to explain the similar process by a liberal intergovernmental approach. Therefore, any theoretical approach that fits best to the research area should better be selected by the researcher as far as social sciences is considered.

Generally speaking, different theories can be applied to a research on energy security. For instance, it is possible to use a neo-functionalist approach in explaining energy policies of the EU with a reference to European Coal and Steel Community (ECSC). Similarly, a realist approach can also be plausible when the lack of a unique EU policy in energy issues is taken into consideration. Therefore, application of an existing international relations theory may help to establish a theoretical base for this study.

After the end of the cold war, many scholars have argued various approaches to explain the developments in international level. A vast range for theoretical approaches has been

discussed in academic circles in order to examine the changing structure of the international system. In this atmosphere, it is normally not so easy to determine which theory fits best to a research area. Fortunately, the nature of this study helps to overcome this challenge and provides a clear framework for defining the theoretical base of the study.

However, deciding the theory that can explain the energy policies of the EU and Turkey better is the crucial question for shaping the framework of this study. In answering this question a set of factors should be taken into consideration. As a result of the analysis of those factors, it is argued in this paper that a neo-realist approach fits for examining energy policies of the EU and the role of Turkey in EU's energy security. Without understanding the unipolar structure and the balancing mechanisms, it would be very difficult to understand the energy policies of international actors.

This section of the study, therefore examines the main arguments of realist school as well as the origins of neo-realist theory with respect to IR study. Further, the chapter introduces assumptions about the post-Cold War structure discussed among political science scholars particularly working on neo-realism. In doing so, the main purpose is to illuminate the features of energy politics as well as EU - Turkish relations from the perspective of this theoretical approach and its explanations about the post-Cold War structure of the international system.

1.2. Neo-Realism in General

As one of the most prominent international relations theory, neo-realism has roots in the classical realist theory. Like the traditional realist assumptions, neo-realism assumes states as the main actors of the system and the significant role of power in international politics. In addition, both realists and neo-realists argue that a condition of anarchy exists at international level. This means that there is no overarching central authority above the rule of sovereign states. All these conditions, according to the realist based theories, require a state to resort self-help in order to survive in an international order where a web of power relations is the most decisive factor for its own existence. Despite all criticisms from different authors in modern international relations disciple, neo-realism prevails to be one

of the most cited and dominant theory of the field.[2] Since neo-realism dominates the world of security studies, evaluating energy security issues from a neo-realist perspective may be justifiable. This justification will be clearer when the detailed analysis of the subject is provided in later chapters.

Realism has become one of the most commonly resorted international relations theories since the early twentieth century. Although inter-war period theorists Morgenthau and Carr have emerged as the dominant figures of this tradition, it has often claimed to have links with the works of former thinkers such as Thucydides, Machiavelli and Hobbes. As the name of theory implies, realism examines all the elements of international relations through the lenses of the real world. This makes it different from idealism, which can be evaluated as the ideological adversary of realism.

To have a more comprehensive understanding, it would be necessary to evaluate certain features of neo-realism that all the realist school theorists agreed on. These features may be explained under certain sub-titles which are; (1) the anarchic nature of the system, (2) state supremacy, (3) search for state survival, (4) the significance of power and (5) self help. A deeper analysis of these concepts is necessary to understand how a neo-realist approach fits into the issue of energy security and understand the energy politics among states. In the following chapters, specific references to the energy issues will be attached to the explanations about realist arguments in order to demonstrate the conformity of the theory to the subject matter.

1.3. Main Realist Arguments

1.3.1. The Anarchic Nature of the System

First of all, one of the most fundamental assumptions of realist school is the lack of a central authority at international level which causes an anarchic international system. In such an anarchic and lawless order where the actors cannot trust to others, the possibility of cooperation is normally limited and temporary. Neo-realism defines this situation as a

[2] Lamy, Steven L., 2006, "Contemporary mainstream approaches: neo-realism and neo-liberalism" in Baylis, John and Smith, Steve (eds.), *The Globalization of World Politics*: *An Introduction to International Relations,* Oxford: Oxford University Press, p. 205.

'state of perpetual international anarchy' in which states must ensure their security above all.[3]

This chaotic situation reinforces states to resort two main types of efforts. Internal efforts include increasing economic power, military capabilities and other similar strategies whereas external efforts requires strategies for strengthening own alliances and/or weakening rival alliances.[4] Since the ability to increase internal efforts is limited to the existing capabilities, resources, capital and human resources of a state, external alliances, i.e. alliances gain considerable importance in an anarchic structure. An alliance is defined by Stephen Walt as "a formal or informal arrangement for security cooperation between two or more states".[5] Generally speaking, the motivation behind forming an alliance is balancing the powerful state rather than ideology or historical relations of the actors. Therefore, security considerations are likely to take precedence and ideologically based alliances are not likely to survive when pragmatic interests intrude.[6] In line with this argument, the self-oriented energy security policies of EU members, which will be examined in the following chapters, clearly support the realist argument of the anarchic nature of the system.

1.3.2. State Supremacy

Secondly, realism covers the theories and approaches which set 'state' to the central position as the primary actor of international relations. With their trivial influencing capacity –as the realist assumption argues– other sub-state or trans-state organizations such as international institutions, multinational corporations or NGOs are not accepted as important international actors which may have a potential to influence the structure of the system. Although neo-realism does not specifically mention state as the unique actor, the system level approach that the theory suggests naturally introduces states as the principal

[3] This definition was initially used by Waltz and later supported by many other structural realists. See: Waltz, Kenneth N., 1979, *Theory of International Politics,* Massachusetts: Addison-Wesley Publishing, pp. 102-129.
[4] Lamy, *op-cit.,* pp. 208-9.
[5] Walt, Stephen M., 1990, *The Origins of Alliances,* Ithaca: Cornell University Press, p. 12.
[6] Lamy, *op-cit.,* p. 38.

units of international political system.[7] Despite the European Commission's efforts to forma common energy policy, developments within the member states depicts a clear support for neo-realist arguments. A detailed analysis of this evidence will be evaluated in the following part of this study.

Moreover, there is a special emphasis on great powers in neo-realist assumption. As Waltz puts it "the functions of states are similar, and distinctions among them arise principally from their varied capabilities… The units of such an order are then distinguished primarily by their greater or lesser capabilities…"[8] Then comes the importance of great powers which have been defined as the units with greater capabilities in a system. At the European level, the great powers are the bigger member states with more population, more economic strength and more military capabilities. This perception of realism also proves its relevance if we look at the voting mechanisms of the Union's decision making process. These great powers have more voting power than others. From the lenses of neo-realism, in short, the crucial point is to investigate the policies and interests of great powers. As a natural consequence of this fact, examining the policies of Germany, France, Italy and the UK as the leading powers in European integration, and their relations with the main natural gas suppliers of the continent are indispensable for this study. This is also in conformity with what well-known neo-realist John Mearsheimer described in the Europe's future:

> Five European States now have sufficient wealth and population to qualify as potential great powers: the United Kingdom, France, Germany, Italy, and Russia. Of these, however, only Germany has the earmarks of a potential hegemon. It is the wealthiest European state, has the second-largest population (after Russia), and has the most powerful army in the region. Nevertheless, Germany is not a great power today, much less a potential hegemon, because it has no nuclear weapons of its own and because it is heavily dependent on the United States for its security.[9]

In line with this classification, the following chapters will evaluate energy policies of these bigger members of the Union and comment on their policy preferences from the

[7] Viotti, Paul R. and Kauppi, Mark V., 1999, *International Relations Theory: Realism Pluralism, Globalism and Beyond,* Boston: Allyn and Bacon, p. 6.
[8] Waltz, Kenneth N., *op-cit*., p. 97.
[9] Mearsheimer, John, 2001, "The Future of American Pacifier", *Foreign Affairs,* Vol. 80, No: 5, September-October 2001, p.50.

lenses of structural realist elements such as balance of power, unipolarity versus multipolarity and EU's global actorness.

1.3.3. Search for State Survival

Another realist principle that all realists agree on is that the pre-eminent goal of the actors of international system is to survive in an anarchic world order. Without attaining this primary objective, all other goals of a state become meaningless and impossible to achieve.[10] However, the survival of a state can never be guaranteed because the use of force can be seen as a legitimate instrument for some countries when a threat is perceived. In an anarchic order in which states strive for survival, realists are skeptical about the universal moral principles and warn the leaders not to sacrifice state interests in exchange for ethical behaviors. This realist argument is known as the dual moral standards.[11] The moral standards at domestic level may completely differ from ethical standards at international level. An ethical political community may only prevail by the existence of a state, which includes a hierarchy in power relations between actors. The survival of a state in international politics cannot be bound up with the standards of individual ethical principles as in the case of domestic politics.[12] Therefore, cooperation, which can be easily achieved at domestic level, is something difficult to achieve at international level.

An international actor may be willing to cooperate as long as the benefits of the cooperation are at least equal to or more than the benefits of other international actors. In short, the possibility of cooperation in an anarchic political structure is limited to states' perceptions of their relative gains.[13] The evaluation of energy policies of EU members may also present sufficient data to confirm that state survival is an important element of policy formation process of member states, which will elaborately discussed in the following chapters.

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[10] Arı, Tayyar, 2004, *Uluslar arası İlişkiler Teorileri: Çatışma, Hegemonya, İşbirliği,* İstanbul: Alfa Yayınları, p. 199.
[11] Morgenthau, Hans J., 1939, "The Ressurrection of Neutrality in Europe", *The American Political Science Review,* Vol.33, No:3, pp. 483-484.
[12] Dunne, Tim and Schmidt, Brian C., 2006, "Realism" in Baylis, John and Smith, Steve (eds.), *The Globalization of World Politics*: *An Introduction to International Relations,* Oxford: Oxford University Press, pp. 174-5.
[13] Grieco, Joseph, 1988, "Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism", *International Organization,* Vol. 42, No:3, pp. 485-507.

1.3.4. The Significance of Power

Realist-based theories of international relations are the approaches that most frequently use power in their explanation. Realist thinkers focus generally on interest rather than ideology, and seek peace through strength rather than cooperation. The fourth common argument peculiar to realism, therefore, is the concept of interest defined in terms of power. Weber's definition of state as "a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory" suggests that power is accumulated in the hands of state initially.[14] A sovereign state has the sole authority over its own territorial limits. Then, as the various realist based schools argue, states search for power at international level.[15] In that sense, energy issues may properly be examined by using an analogous approach. States generally wish to control all the production of energy resources within their territories. Then they search for more energy resources out of their own territories. The sources of energy they controlled, provides them a considerable and tangible power in their relations with other states at the international system. Therefore, it can be asserted that this realist assumption is completely relevant for examining energy issues.

Moreover, power provides the ability to threat or use of force (if necessary) in order to get what a state seeks. In that respect, power is a strategic concept for the survival of a state in an anarchic environment. For realists, power has two specific features: Firstly, power is relational. A country can use power as long as there are other countries and a certain degree of relationship exists among them. Secondly, power is a relative concept.[16] This means that the calculation of own power is insufficient. The power of other actors should also be taken into consideration. Yet, without sufficient information, it is difficult to calculate power and capacity of others. This brings a complication of calculation. As the founder of neo-realism, Waltz preferred the use of capabilities in order to overcome the problem of power calculation and introduced some criteria to determine the level of power

[14] Gerth, H. H. and Mills, C. Wright, 1946, *From Max Weber: Essays in Sociology,* New York: Oxford University Press, pp. 77–78.
[15] Dunne and Schmidt, *Op-cit..,* pp.172-3.
[16] *Ibid.,* p. 173.

of an actor, which are (1) size of population, (2) size of territory, (3) resource endowment, (4) economic capability, (5) military strength, and (6) political stability and competence.[17]

From this point of view, energy resources have some direct and indirect effects on those criteria which Waltz argued as reference points for power calculation. Energy resources not only provide economic capability but also help to possess more effective military capabilities and secure a state by giving the ability to survive longer in a potential conflict. One of the most obvious examples for this argument is the Persian Gulf War between Iran and Iraq during 1980s. Both Iran and Iraq have had rich oil and gas resources and they had been listed among the important oil exporting countries. This energy trade had brought them certain economic capabilities. The economic welfare provided by energy sources helped these countries to have weapons and warfare equipment. As a result, when combined with other capabilities such as human capital and internal political stability, the war between these two neighboring countries lasted 8 years which is comparably a very long time for engaging a war in the late 21st century.[18] The energy resources that these countries possess are one of the main reasons that both Iran and Iraq could survive during such a destructive war. Therefore, it can easily be argued that energy issues are directly connected to the power politics and an analysis on energy politics can be constructed on a realist based theory.

Since neo-realism retains the power based approach of realism, it may be used as a theoretical ground for this study as well. Moreover, neo-realism may provide a more eligible framework compared to classical realism because the former does not perceive the need for power solely as an outcome which resulted from human nature. Neo-realism explains power as a tool rather than a goal which helps to survive. As it was mentioned above, energy resources constitutes a critical part of power for a state to survive, thus energy is a tool for a state to perpetuate in an international order which is characterized with anarchy. From this perspective, selecting a neo-realist based theoretical approach to energy seems to be a suitable framework for this study.

[17] Waltz, 1979, *op-cit..,* 131.
[18] For a more detailed analysis of the balance among parties of the war, see: Karsh, Efraim, 2002, *The Iran-Iraq War 1980-1988,* Oxford: Osprey Publishing, pp. 30-62.

1.3.5. Self-help

The concept of 'self-help' is another principle argument that all realist approaches agree on. This is also one of the central points that realist views diverge from its ideological counterpart liberalism which stresses the importance of cooperation among states in order to prevent war and survive in anarchy. However, as realists argue, in an anarchic world order which is the main characteristic of the current situation in international politics, 'self-help' becomes an essential element of state survival. As Waltz argues:

> To achieve their objectives and maintain their security, the units in a condition of anarchy –be they people, corporations, states, or whatever– must rely on the means they can generate and the arrangements they can make for themselves. Self-help is necessarily the principle of action in an anarchic order. A self-help situation is one of high risk – of bankruptcy in the economic realm and of war in a world of free states[19].

In his earlier work, Waltz also discussed the relevance of self-help in international relations with a reference to Rousseau's famous parable of stug hunt and contented that there is a lack of trust among states and individualistic behaviors of states prevail over collective goods when national interests are at stake.[20] As a result of self-help principle, states try to maximize their power –particularly in military sense– in order to provide their own security. This, in turn, causes an increase in feeling of insecurity among other international actors. In a spiral effect, others follow a similar path of securitization because of the self-help principle. Therefore, in a system characterized by self-help, a balance of power naturally emerges as a result of securitization efforts of the actors.[21]

In a self-help system, alliances constitute important parts of the structure because they help to check and balance the power within the system. Through the interaction of states, equilibrium of power is constructed automatically as a result of state behaviors. The Concert of Europe in the early nineteenth century and the Cold War are the most prominent examples of the balance of power.[22] Peaceful changes or wars shift the balance

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[19] Waltz, 1979, *op-cit.,* p. 111.
[20] Waltz, Kenneth N., 1959, *Man, State and War: A Theoretical Analysis*, New York: Columbia University Press, pp. 167-8.
[21] Dunne and Schmidt, *op-cit.,* p. 175.
[22] The concept of "balance of power" is one of the core elements of neo-realism. Waltz offered an explanation of balancing with his Theories of International Politics (1979). Further the discussion on balance of power evolved through a series of works put forth by neo-realists. Walt shifted the discussion the topic to

within a system which is generally restored by the formation of a new balance. This shift may even bring a structural change in the system. For instance, World War II changed the system into a bipolar international order as a result of a great fight among actors. On the contrary, after the end of Cold War, a peaceful change has been experienced at the system level and the structure has altered into a unipolar international system.

From the energy security perspective, the European states' behaviors and their relationship with energy suppliers depicts clear examples of self-help mechanism as neo-realism argues. Their policy preferences to provide security not only show a desire to diminish their dependency on imported energy resources but also an effort of balancing against the efforts to domination of the system by a hegemonic power which may pose great threat to their survival.

1.4. Neo-realist Breakthrough

Although neo-realist theory may be regarded as a derivative of realism, there are certain propositions that may be evaluated as the neo-realist contribution to traditional realism. First of all, neo-realism introduced a deductive approach to the classical inductive explanation of classical realism. Secondly, neo-realists have defined power in a much broader sense by utilizing this concept as a means of providing state survival rather than as an ambiguous and limitless objective of states. Finally, the third important contribution of neo-realism is the explanation of state reaction in a system which is characterized by the condition of anarchy.

1.4.1. Introduction of a Deductive Approach

The most important neo-realist contribution to classical realism is about "distinguishing factors internal to international political systems from those that are external." By introducing structural and unit level analysis, neo-realism argues the autonomy of international politics.[23] The former realist thinking about state's unilateral impact over

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a "balance of threat" in his Origins of Alliances (1987) whereas Mearsheimer introduced the offensive element to balance of power notion in the Tragedy of Great Power Politics (2001). The end of the Cold War further elaborated the debate over balancing which is discussed in the following parts of this section.

[23] Waltz, Kenneth N., 1990, "Realist Thought and Neo-realist Theory", *Journal of International Affairs*, Vol. 44, No.1, p. 29.

system was abandoned by the neo-realists. They argued a reciprocal interaction between the unit and the structure in an international system. In other words, the first break from traditional realism is a deductive approach introduced by the neo-realism. Morgenthau and other realists concentrated on the actions and interactions of states and those who take role in the decision making in the name of states. Realists strictly limited the direction of cause and effect relationship in international relations into one way. According to the realism, the outcomes at international level are resulted from the acts and interactions of states.[24] However, neo-realism's deductive approach introduced a distinction between structural and unit level causes and effects. As Waltz argues:

> International politics can be understood only if the effects of structure are added to traditional realism's unit level explanations. More generally, neo-realism reconceives the causal link between interacting units and international outcomes. Neo-realist theory shows that causes run not in one direction, from interacting units to outcomes produced, but rather in two directions.[25]

Neo-realism contends that international outcomes such as peace and war or alliance formation may have either unit level causes or have some causes located at structural level.[26] As Kenneth Waltz put forward in 1979, the interaction between the structure and units (states) is a mutual relationship. Figure 1 shows this interaction at system level. On the figure, $N_{1,2,3}$ represents states internally generating their external effects. $X_{1,2,3}$ represents the external effects of the states which interacts with each other at the system level. The circle represents the international system. In addition to the effects of units on each other and on the system, there are systemic affects on units as well, which in turn affects the internally generated actions of each unit.

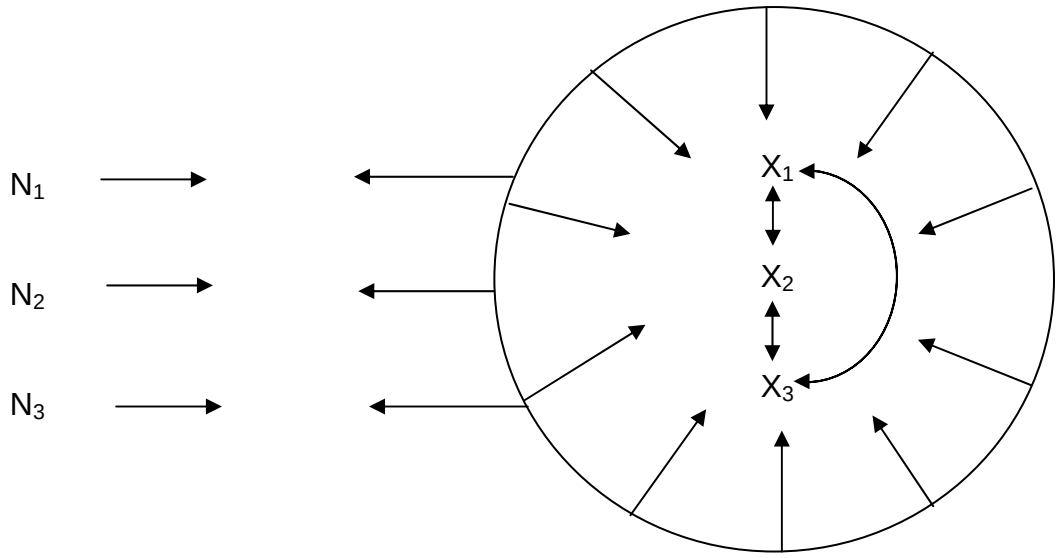
The concept of a system's structure, developed by Waltz, explains how the structure and variations in it affect the state's behavior. Therefore, interaction of states not only shapes the international structure, but also constrains them into certain type of behavior.

> The concept of structure is based on the fact that units differently juxtaposed and combined behave differently and in an interacting produce different outcomes… Structure defines the arrangement, or the ordering, of the parts of a

[24] Morgenthau, Hans J., 1972, *Politics Among Nations: The Struggle for Power and Peace, 5th ed.* , New York: Alfred A. Knopf, pp. 4-14.
[25] Waltz, 1990, *op-cit.,* p. 34.
[26] Dunne and Schmidt, *op-cit.,* p. 169.

system. Structure is not a collection of political institutions but rather the arrangement of them.[27]

Figure 1. Structure - Unit Interaction in Neo-realist Theory



N_1, N_2, N_3 : States in the international system
X_1, X_2, X_3 : External Effects of States

Source: Waltz, *Theory of International Politics*, p. 100.

The arrangement of units, first of all, gives a clue for understanding the structure of the system. The ordering principle of a system helps to understand how the parts are interacting. For instance, in domestic politics, the ordering principle is hierarchy while in international politics, it is anarchy. Waltz contended that the structure of the system is also shaped by the differentiation of units and the specification of their functions as well as by the distribution of capabilities across units. From this point of view, the prominent characteristics of international politics, unlike the domestic politics, seems to be the lack of order and organization. The number and capabilities of international organizations grow and supranational agents are becoming more effective, but as neo-realism argues, they cannot act in important ways unless the concerned states provide them the necessary support. Therefore, international structures, like economic markets, are formed by

[27] Waltz, 1979, *op-cit.,* p. 81.

interaction of self-regarding units. In other words, structures emerge from the spontaneous actions of coexisting states. From this point of view, the anarchic nature of international politics is the first determinant to comprehend the structure of the system.[28]

A second determinant that helps to define the system structure is the character of units. The states are the units of international political systems and are not formally differentiated by the functions they perform as it is in the domestic realm. Because the system is anarchic, no government or international rule can protect the actors against the aggression of other actors. Therefore, all of the units in a system have similar functions and implement similar actions in order to survive. There is no subordination based on functionality but capability in international politics. The units are functionally similar entities, yet vary widely in size, wealth, power and form.[29]

This distribution of capabilities among units of a system is the third determinant of system's structure according to the founding father of neo-realism. Instead of traditions, objectives, ideologies or form of governments of the states, the capabilities of the units are significant in determining the structure of the system.[30] Moreover, neo-realism pays particular attention on the number of major units within a system. Waltz contended that international structures vary with changes in the number of great powers. And great powers are differentiated from others by their combined capabilities they command. If a change takes place in capabilities, then the behaviors of states and outcome may change which in turn may cause a change in structure. To sum up, the idea that international politics is a system composed of a precisely defined structure and interacting units is the first and foremost departure of neo-realism from traditional realists.[31]

This kind of neo-realist explanation may help us to understand the activities of units in forming their energy policies. For instance, the foreign policies –thus the energy policies– of European powers were almost closely associated with the similar policies of United States during the whole cold-war period. As Anders Wivel clearly puts it, "convergence is the dominant characteristic of both Euro-Atlantic and intra-European behavior". Even after

[28] *Ibid.,* pp. 88-93.
[29] *Ibid.,* pp. 94-97.
[30] *Ibid.,* pp. 98-99.
[31] Waltz, 1990, *op-cit.,* pp. 29-30.

the end of the Cold War, the European actors have already not shown the ability to balance the United States. Therefore, their behavior can be defined as bandwagoning in realist terms.[32] In neo-realist explanation, bandwagoning describes the act of weaker states preferring to join the policies of a great power or coalition of powers in order to provide their own security. Bandwagoning is something in sharp contrast to the behavior of balancing.[33] In more concrete terms, the bandwagoning activities in transatlantic relations can be clearly understood from the modest military spending of European countries, their approval of most of the ad hoc US coalitions as well as their still continuing adherence and contribution to NATO. To reinforce this argument, some historical explanation may be fruitful. During the Cold War, neither Germany nor any other member of Western Europe dared to develop a special relationship with Moscow on energy trade, which would mean a great challenge to the Cold War policies of the US. At that time, the European actors did not have the possibility to balance any of the superpowers in a bi-polar world. Moreover, they could not be able to form a balancing coalition against the US or Soviet Union.

From this point of view, a neo-realist analysis of post-Cold War international system may contribute to comprehend the energy policies of actors. Waltz, for example, mentioned the structural change after the end of Cold War and evaluated the American hegemony in international relations:

> Peace is sometimes linked to the presence of a hegemonic power, sometimes to a balance among powers... Hegemony leads to balance, which is easy to see historically and easy to understand theoretically. That is now happening, but haltingly so because the United States still has benefits to offer and many other countries have become accustomed to their easy lives with the United States bearing many of their burdens… The American aspiration to freeze historical development by working to keep the world unipolar is doomed. In the not very long run, the task will exceed America's economic, military and political resources; and the very effort to maintain a hegemonic position is the surest way to undermine it.[34]

As it is clear in the words of Waltz, what neo-realism envisages for the future of international politics is a structural change in the system. The capabilities of the United

[32] Wivel, Anders, 2008, "Balancing against threats or bandwagoning with power? Europe and transatlantic relationship after the Cold War", *Cambridge Review of International Affairs,* Vol.21, No: 3, p. 295-296.
[33] Waltz, 1979, *op-cit.,* pp. 125-6; Walt, 1987, *op. cit. ,* p. 263-4.
[34] Waltz, Kenneth, 2000, "Intimations of Multipolarity" in Hansen, Berthie and Bertel Heuril (eds.), *The New World Order*, London: Macmillan, pp. 14-15.

States for maintaining the American hegemony over the system will be limited to a certain point, where balancing efforts from other actors will become overt. Then, the international political system may be transformed into a multi-polar structure, where several great powers will have almost equal power. According to realist arguments, Germany, France, the United Kingdom, and Italy are the potential great powers in Europe while China, Japan and India are the great power candidates of Eastern part of the world. Russia, as a country borders both Europe and Eastern Asia is another state which has a potential for becoming a great power in a multi-polar world.[35] Moreover, as Waltz argues, American aspiration to enforce balancing both in Europe and Asia will finally exceed United States' economic, military and political resources.[36] In such an international structure, European Union member states should define their policies according to the new power configuration because they will no more have the advantage of American security umbrella.

Despite the fact that Europe still has certain security ties with the US, it is not very abnormal for European countries to develop their own energy policies which constitute an integrated part of their foreign policies. From this realist point of view, many of the European Union members leaded by Germany and Italy have developed special energy relationship with the Russian Federation in order to secure their energy needs. This obviously confirms that there are system level effects on energy policies of the EU members. In other words, the change took place after the end of the Cold War enforces member states to adapt their policies in line with the requirements of the new structure of unipolarity. Therefore, during this period of US unilateralism of the post-Cold War period, EU members have shifted their foreign policies from bandwagoning to a more status que oriented policy.[37]

Although there are some exceptions as in the case of US invasion of Iraq in 2003,[38] general path of foreign policy formation of the European Union countries have been

[35] Mearsheimer, 2001, *op.cit.,* pp. 46-61.
[36] Waltz, 2000, *op. cit.,* p. 16.
[37] Despite the inexistence of any effort to counter the US hegemony in this period, recent studies in the field argues a new type of balancing activity, which was labeled as "soft-balancing".
[38] Because of the civilian power characteristic of the EU as well as the democracy notion among European countries, an effective opposition to American unilateralism has taken place in several member states. A split between major European powers during the American invasion of Iraq in 2003 was a prominent example of

somehow congruent to the US foreign policy. However, –particularly in the field of energy– the national foreign policy considerations of the member states are in line with what neo-realism argues about the post Cold War developments. The current international structure dominated by the American 'hegemony' may evolve into a multi-polar world in which bigger EU member states will assume great power status. This may clearly help to explain the reason why Germany, Italy and some other EU members have developed special relations with Russia and the reason why the European Commission continuously stresses the importance of searching for alternative routes from other energy rich regions. The future may also bring a rivalry and new alliance formations among European powers, Asian powers and the United States in a multi-polar international political system. Therefore, it is vitally important to secure energy for the European Union members if they will assume a greater role in a changed international setting.

1.4.2. A Broader Definition of Power

The explanation of the concept of power that neo-realism introduced is a second divergence of the theory from traditional realism.[39] In classical realism, the search for power is rooted in the human nature like conflict and war. Since there is a competition for scarce resources, a struggle for power is an ultimate consequence. For many realists, therefore, whatever the level of power an actor possesses, the desire for more power will prevail. Therefore, for classical realism, the rational behavior of a statesman is searching for as much power as possible. From this point of view, power is perceived as an end in itself and national interests are defined in terms of power.[40]

On the other hand, neo-realists, rather than viewing power as an end in itself, see "power as a possibly useful means, with states running risks if they have either too little or too much of it".[41] For neo-realism, insufficient power may provoke others' aggressive behaviors while excessive power may prompt others to search for increasing their

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this cleavage. For more details, see: Haseler, Stephen, 2005, *Super State: The New Europe and Its Challenge to America,* London: I.B. Tauris, pp. 52-54.

[39] For a detailed analysis of differences between realist and neo-realist perception of power, see: Tabarcia, Niculae, 2009, "Power Relations between Realism and Neorealism in Hans Morgenthau's and Kenneth Waltz's Vision", *Strategic Impact,* Issue: 4, pp. 79-85.

[40] Morgenthau, 1972, *op-cit.*, pp.8-10.

[41] Waltz, 1990, *op-cit.,* p. 36.

capabilities to feel themselves secure against the preponderant power. Therefore, the level of power should be balanced. Sensible statesmen would try to have an appropriate amount of power necessary to secure the state. Neo-realism also reminds that in crucial situations, the ultimate concern of states is not for power but for security. Moreover, the power in terms of capabilities of a state defines the characteristics of structure. The structure of the system and changes in structure is almost shaped by the distribution of power among the units. In short, the introduction of power as an instrument of providing security rather than an indeterminate target of an international actor is the second major contribution of neo-realism. [42]

In line with this broader definition of power that Waltz introduced into the theory of international politics, some other thinkers have also valuable contribution to neo-realist perception of power. Joseph Grieco and others criticized new liberal institutionalism and stressed the impact of relative power against international cooperation on foreign policy decisions of states.[43] According to the defenders of institutionalism, states are interested in increasing their power by obtaining absolute gains. States are also interested in cooperation with other international actors in order to increase their power. In contrary, according to neo-realists, states are inclined to calculate the relative gains in a cooperative action with other states. Therefore, anxiety of being cheated and relatively high gains of any other international actor are the most serious impediments against international cooperation. Similarly states may refrain from cooperation if the relative losses of the action are higher than other units in cooperation.

One of the most prominent examples for this situation may be the resistance of United States for not ratifying the Kyoto Protocol under the auspices of United Nations. The Kyoto Protocol aimed at combating global warming by a commitment of countries to reduce the level of four greenhouse gases, which causes environmental pollution. Although this commitment is evaluated as a burden on national economy by the signatory states, 187

[42] *Ibid.,* p. 36.
[43] For a detailed analysis of the absolute vs. relative gains discussions, see: Grieco, Joseph (1988), "Anarchy and the limits of cooperation: A realist critique of the newest liberal institutionalism", *International Organization,* Vol. 42, No:3, pp. 485-507; and Grieco, Joseph, Powell, Robert and Duncan Snidal (1993), "The Relative-Gains Problem for International Cooperation", *The American Political Science Review,* Vol. 87, No:3, pp. 727-743.

of the UN members have signed and ratified the protocol as of 2009. Despite signing the Kyoto Protocol, the US Government has neither ratified nor withdrawn from the process.[44] The American position against Kyoto Protocol is purely political and can be read in line with the realist argument of 'absolute versus relative gains'. In more concrete terms, the economic burden by implementing the Kyoto will bring much more burden on American industry than any other country, so that the US policy makers refrain from ratifying the protocol.

This neo-realist analysis of power may also help to explain the energy policies of European Union members. The energy requirements of the European states should be satisfied in some way or the other. Germany, for example, has a share of 12.5 percent of nuclear power in its total energy supply and could invest more on nuclear power as the French have already done. However, as explained above, too much power may irritate others about the intentions of states and provoke them to invest more on developing similar facilities. If Germany invests much more than the current level in developing nuclear energy, Russia or France may become anxious about the nuclear intentions of Germany. As Mearsheimer noted, "in a security competition among the great powers of Europe, Germany would probably become a potential hegemon and thus the main source of worry".[45] Similarly special relationship between Germany and Russia has already given rise to anxiety among other member states, particularly the states bridging between Russia and other EU members, i.e. Baltic countries and Poland.[46] Because energy resources directly contribute the capabilities of an actor, others would easily be irritated by the intention of that actor. That may be the main reason that, while searching for new energy supplies, the European countries follow a balanced energy policy and limit their efforts in order to set the other members' mind at ease over their actual intentions.

[44] For more detailed analysis of US policy with respect to Kyoto protocol and the climate change issues, see: Harris, Paul G., 1999, "Common but differentiated responsibility: The Kyoto Protocol and United States Policy, *N.Y.U. Environmental Law Journal,* Vol. 27, pp. 27-48; Electric Power Reseacrh Institute (ERPI) Climate Brief, 2000, *Cost of Kyoto Protocol to the United States: Implications of a Multi-Gas Strategy, http://globalclimate.epri.com/briefs/1001097.pdf.*

[45] Mearsheimer, 2001, *op-cit.,* p.52.

[46] Bowley, Graham, 2005, "Russian Sacrifice: Poland", *International Herald Tribune, 25 November 2005,* www.iht.com.

Furthermore, the member states have not reached an agreement on a common energy policy which would bind all member states even in their relations with supplier countries. The lack of common policy in energy clearly confirms realist argument of relative gains. Energy security is a vitally important phenomenon that member states are not willing to leave decision making into the other's discretion. The national interests of some member states are completely different from others as far as energy politics are considered. Thus, implementing a unique energy policy would increase the gains of some members at a lesser extend than the gains of other members. For example, a policy that favors special relationship with Russia and promotes increasing natural gas trade with this country may be very fruitful for Germany. However, the benefits of France from such a policy may be less than the benefits of Germany. Moreover, there would be no benefit from Portugal or Spain from such a policy. On the other hand, a policy favoring special relationship with North African suppliers may not be beneficial for Germany, but for all Mediterranean EU members. In such cases the relative gains of one or more member states against the others will be higher and this constitutes a real impediment against forming a unique energy policy at the Union level. In short, neo-realists understanding of power is quite different from both classical realist and liberal approaches, and is in conformity with the facts of energy politics.

1.4.3. The Reaction of States to the Condition of Anarchy

A third difference that neo-realism brought to the realist theory is about the unit level analysis. In realist thought, states are regarded as the main actors in international relations and they are unlike in the form. In other words, the states may have different government types, ideologies or their leaders may show different characters. Therefore, the behaviors of states acting in international arena naturally vary. Although agreed on this realist assumption, neo-realists further argued that states are made functionally similar by the limits of structure.[47] The power they obtain makes them different from each other. Neo-realists contended that the variation in the composition of states and their power does not have as much impact on international politics as realists argued because the logic of anarchy does not vary with the power configuration of states. It has an impact on the

[47] Waltz, Kenneth, 1991, "Realist Thought and Neo-Realist Theory" in Rothstein, Robert L., *The Evolution of Theory in International Relations,* Columbia: University of South Carolina Press, pp.36-7.

structure of the system. Therefore, the realist argument which concentrates solely on unit behavior has been criticized by the neo-realists and as previously mentioned they argued the effects of structures on unit behavior and outcome.[48] In other words, the reaction against a similar threat may vary not mainly because of the internal features of states, but because of their respective positions within the international political structure. For instance, the reaction of Germany against a threat perception would naturally be different from the reaction of Slovakia against the same threat. Germany may react by increasing internal efforts like enhancing the capabilities of its army.

On the other hand, Slovakia may prefer to react by using external efforts like bandwagoning. Put differently, the behavior of Germany against a threat may resemble much more to the reactions of China or India to the same threat rather than the reactions of Czech Republic or Slovakia. China and India are located geographically farther than Czech Republic or Slovakia to Germany. Moreover, the internal political structure of Germany resembles to Czech Republic and Slovakia much more than China and India. However, these facts have very little impact on foreign policy considerations. Germany and China would react very similarly against a threat in international arena and their foreign policy decisions would be much more similar because of their positions in international political structure. China and India are great powers like Germany, whereas others are secondary powers. As this example suggests, the perception of how states react to the condition of anarchy is the third contribution of neo-realism to the classical realist thought.

The developments of European energy politics may also be evaluated in line with this neo-realist argument. The EU continuously stresses the importance of market liberalization in different sectors of energy.[49] Among them, the Commission gives priority to the liberalization of electricity and gas markets, which will be discussed in the following chapters. Energy liberalization is an important issue for national security because in a liberalized energy market the control of energy resources may sometimes be delivered to the control of the companies of another country. If a member state goes too far in market liberalization while another state restricts market entry and protect the governmental

[48] Waltz, 1990, *op-cit.,* p. 37.
[49] Eikeland, Per Ove, 2004, "The Long and Winding Road to the Internal Energy Market–Consistencies and inconsistencies in EU policy", FNI report 8/2004.

control on its own energy market, then the former one may be open to external impact of other actors while the latter may protect its interests in energy issues. This may provide leverage to the former in economic terms as well which may change the power configuration at the end. In the light of this, it can be clearly stated that most of the bigger EU members have different implementation in the process of market liberalization. This is clearly in accordance with the neo-realist explanation. The great powers of Europe have different approaches to energy policy as a part of their security. The smaller member states on the other hand follow the policies of a great power which is most suitable to their own interest. For example, French government's defensive policy of merging two big energy companies of France in early 2008 was a counter unitary act against the Commission efforts to implement full liberalization.[50]

Moreover, Italian government is also inclined to protect ENI's dominance in its energy market. Besides the great powers of Europe, some other member states follow a similar policy to them. For example, Spain depicted a protectionist role in the acquisition process of national company Endesa by the Germany's energy giant E.ON.[51] Similarly, Austria holds more than one-third of the shares in OMV, which also concluded a deal with Iran on natural gas imports.[52] Andreas Pointvogl examines the driving factors of divergences in energy policies of the member states and categorizes them according to their market structure and policy priorities. In that research, it is clearly shown that the energy dependency levels of states as well as energy intensity figures have an impact on the behaviors of states in energy politics. The states with high energy dependency depict similar patters of action in their energy policies. All these developments in energy sector not only shows how the member states contradict with the Commission's efforts for developing a unique energy market and a common energy policy, but also clearly indicates the prompt explanation of unit behavior by neo-realism as explained above.

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[50] The shares of Gas De France and Suez are 21 and 22 percent respectively, while the French Government has a share of more than 35 percent of the of the total capital of the merged group. See, Modern Power Systems, 2007, *GdF and Suez to Merge,* Vol. 27 Issue 10, p. 7. ; GDF Suez: A Champion is Born, 2008, *Acquisitions monthly, 1 May 2008, www.aqm-e.com/story.asp%3Fstorycode%3D267522+ENI+bid+for+suez&cd=9&hl=tr&ct=clnk&gl=tr*

[51] Bilefsky, Dan, 2006, "EU tells Spain to drop Endesa sale conditions", *The New York Times,* 20 December 2006, http://www.nytimes.com/2006/12/20/business/worldbusiness/20iht-energy.html.

[52] OMV Corporate News, 2007,: OMV and National Iranian Oil Company: Heads of Agreement for participation in the Iranian South Pars Gas Field and Iran LNG Project, 21 April 2007, www.omv.at.

It is clear that the assumptions of neo-realism mentioned above have proved its relevance for explaining the energy politics at the international political level. Yet the post-Cold War events had great impact on international politics, so that the critics and evaluation of neo-realism should be correctly examined in order to understand the current developments in energy security policies of the European Union member states and Turkey's role within this respect.

1.5. Neo-realism in the Post-Cold War Period

The clear and simple explanation of the international political system that neo-realism introduced was quite impressive during the Cold-War years. However the sudden change in international system by the dissolution of the Soviet Union has completely changed the perception of neo-realism. The initial arguments of the post-Cold War period envisaged by the prominent figures of neo-realism were harshly criticized even by some of the proponents of structural realism.[53] Then, different explanations for the post-Cold War period have been developed by neo-realists. Since then, the scholars of this theory have tried to fill the gaps in neo-realism in order to explain the increasing power of United States and the reaction or lack of reaction of other states in the new unipolar structure. Therefore, before evaluating energy policies of European Union countries and Turkey, the systemic effects on the foreign policy behaviors of these actors should be clearly understood.

1.5.1. Neo-realist Explanation in early 1990s and Critics

As mentioned previously, neo-realism has been a very influential theoretical approach and has introduced several significant propositions of which are accepted even by its adversary theoretical paradigms such as all variants of liberal and institutional theories. Almost all the prevailing theories of the day concur that the world system is anarchic and

[53] Waltz, as the founder of the theory, was the most criticized of neo-realists. Waltz foresaw a swift shift to multipolarity and the collapse of NATO just after the end of the Cold War. (See: Waltz, Kenneth N., 1993, "The Emerging Structure of International Politics", *International Security,* Vol. 18, No: 2, pp. 44-78.) The events took place in the following years, however, showed differences from what Waltz stipulated in early 1990s. For a critical challange to the neo-realism explanation, see: Ashley, Richard K., "The Poverty of neorealism", *International Organizations*, Vol. 38, No:2, pp. 225-286; Ruggie, John G. "Continuity and Transformation in the World Polity: Toward a Neorealist Synthesis," *World Politics,* Vol. 35 No:2, pp. 261-285; Vazques, John, *The Power of Power Politics: From Classical Realism to Neo-traditionalism,* Cambridge: Cambridge University Press, 1998, pp. 317-369.

there is no superior institutional structure above the nation states. Furthermore, nearly all theoretical approaches agree on security concerns of states which direct them to the search for power.[54]

In contrast, another neo-realist argument has drawn widespread criticism both from opponents and proponents of realism. It is the 'balance of power' concept which envisages the coexistence of two or more states seeking preservation of their own in a self-help system where no superior agent to come to the aid of the states that may be weakening.[55] In such an anarchic system, the balance of power theory defines constraints of the system as well as the actions and motivations of states within the system. As a result the theory expects the formation of a balance of power among actors either using internal or external efforts. The founding father of the theory also mentions that the expected behaviors, i.e. the responses of states to the structural constraints, of actors are generally similar, yet not identical because of the different national responses within states.[56] In other words, the balancing of the system may depend on various factors and therefore may develop in different ways. In light of this description, realists view balance of power system as something similar to the laws of nature: a normal expression of international power and the best guarantee of peace rather than liberal explanation as a means of collective security, which would be intensified by the use of international institutions.[57] In line with this explanation, Grieco argued that "states define balance and equity as distributions of gains that roughly maintain pre-cooperation balances of capabilities".[58] Put another way, even if the states engage in cooperation, they naturally consider the balance of power within the system. In realist terms, any potential exchange between states must exactly preserve the pre-existing balance of power.[59]

In line with this explanation, most neo-realists expected a change in the structure of international system at the end of the Cold War. As early as 1990, Mearsheimer argued

[54] Legro, Jeffrey W. and Moravcsik, Andrew, 1999, "Is Anybody Still a Realist?", *International Security,* Vol. 24, No:2, pp.20-22.
[55] Waltz, 1979, *op-cit*., pp. 117-8.
[56] *Ibid.*, pp.122-3.
[57] Burchill, Scott, 2001, "Realism and Neo-realism" in Burchill et.al., *Theories of International Relations,* Hampshire: Palgrave Macmillan, pp. 72-5.
[58] Grieco, 1988, *op-cit*., p. 501.
[59] Rousseau, David L., "Motivations for Choice: The Silence of Relative Gains in International Politics", *Journal of Conflict Resolution,* Vol. 46, No:3, p. 394.

that "the prospects for major crises and war in Europe were likely to increase markedly after the end of Cold War". [60] He also reminded that multipolarity will replace the existing structure if the superpowers leave Europe and the new structure would be more prone to violence when compared to bipolarity.[61] He further questioned the 'Balkanization of Europe' and argues in a very certain way that multipolarity will emerge in the new European order. Moreover, he defined the peace in Europe as a function of distribution of power and distribution of nuclear capabilities among European powers, and evaluated potential patterns of distribution in detail.[62] Similarly, Waltz agreed with Mearsheimer and accompanied by further argument on defining future great powers at the global scale. Waltz contended that Japan, China and Germany –or a West European State- may become great powers in a ten to twenty years period. Furthermore, he also argued the fall of Russia from the great power status because of its economic incapability.[63] There were also some other scholars defending neo-realist arguments. As a reaction to the neo-liberal and neo-conservative suggestions for perpetuating unipolarity in order to maximize American interests, Christopher Layne argued that unipolarity is a geographical interlude that will give way to multipolarity in the first decade of 21st century. Layne emphasized the adverse consequences of hegemonic efforts and added that states balance against hegemonic power even if that preponderant power behaves in a benevolent manner rather than coercive implementations.[64] In plain terms, balancing against the American power in the existing structure is an unavoidable consequence that the US policy makers should take into consideration.

As mentioned above, neo-realists' explanations about the post-Cold War period have been faced to widespread criticisms. In the early 1990s, idealist approaches challenged realist paradigm and condemned its explanations capacity as inadequate. Holsti described realism as "an anachronism that has lost much of its explanatory and prescriptive power"

[60] Mearsheimer, John J., 1990, "Back to the Future: Instability in Europe after the Cold War", *International Security,* Vol. 15, No: 1, pp. 5-6.
[61] *Ibid.*, p.7.
[62] *Ibid.*, pp. 31-40. Mearsheimer examined four future scenario: Europe without nuclear arsenal, continuation of the current status of nuclear weapons, well-managed nuclear proliferation or the opposite.
[63] Waltz, 1993, *op-cit*., pp. 50-61.
[64] Layne, Christopher, 1993, "The Unipolar Illusion: Why New Great Powers Rise", *International Security,* Vol. 17, No: 4, pp. 5-51.

in the post-Cold War order.[65] Similarly, Kegley criticized realism for being inadequate in the aftermath of bipolar structure and argued the relevance of neo-idealist explanations in the new international order.[66] In that period, even defenders of realists, such as Jervis, questioned the adequacy of realism as a guide to understand the future international politics.[67] The number of criticisms intensified through the end of the decade as a result of the developments in international relations such as increasing U.S. unilateralism, the continuation of American presence in Europe and Asia and NATO's expansion to the Eastern Europe. Keohane, for example, criticized Waltz in particular and neo-realists in general for underestimating the role of institutions and therefore misinterpreting the end of Cold War.[68] Keohane supported his argument by Waltz's forecast about the dissolution of NATO in the absence of an adversary.[69] Legro and Moravcsik, on the other hand, criticized defenders of realism who seek to address anomalies by recasting realism in forms that are theoretically less determinate, less coherent and less distinctive to realism.[70]

1.5.2. Extended Unipolarity and Theoretical Adaptation

As a reaction to numerous critics both from splinter groups and external quarters such as liberal institutionalism, democratic peace school and constructivism, neo-realists have withstood and reconfirmed the unipolarity of the structure and developed some explanations for the delay in a shift to multipolarity.[71] According to Huntington, the emerging would was best described as a 'uni-mutipolar' structure with United States as a superpower and with six other major powers, which were: the Soviet Union, Japan, China,

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[65] Holsti, O. R., 1991, "International Systems, System Change, and Foreign Policy", *Diplomatic History,* Vol. 15, pp. 84-88.
[66] Kegley, Charles W., 1993, "The Neoidealist Moment in International Studies? Realist Myths and the New International Realities", *International Studies Qarterly,* Vol. 37, No: 2, pp. 131-146.
[67] Jervis, R., 1992, "A Usable Past for the Future" in Hogan, M.J., *The End of the Cold War: Its Meaning and Implications*, New York: Cambridge University Press, pp. 266-268.
[68] Keohane, Robert and Waltz, Kenneth N., 2000, "The Neo-realist and his Critic", *International Security,* Vol. 25, No:3, pp. 204-205.
[69] Waltz stated in his 1993 paper that "NATO's days were not numbered, but its years were" and contended that NATO will disappear after the American withdrawal from the continent. See, Waltz, 1993, *op-cit*., p.76.
[70] Legro and Moravcsik, 1999, *op-cit*., pp.5-55.
[71] Snyder, Glenn, H., 2002, "Mearsheimer's World – Offensive Realism and the Struggle for Security", *International Security,* Vol. 27, No:1, p.149.

Germany, the UK and France.[72] Moreover, Waltz clearly argued once more that the system will turn into a multipolar structure:

> The twentieth century has been unique in modern history; for three centuries the structure of international politics remained multipolar, in the twentieth century it has changed three times. Multipolar at the outset, it became bipolar after the Second World War, unipolar with the disintegration of the Soviet Union, and as the new millennium dawns it is gradually becoming multipolar once more.[73]

Consistent with his early works[74], Waltz rejected the criticisms over neo-realism's inability to explain the developments in international politics about the post-Cold War period. NATO's expansion, in that respect, is not a rational move in neo-realist view. For Waltz, "adapt statesmen keep their countries' potential adversaries divided. The American administration seems to delight in bringing them together."[75] As the NATO enlargement continues towards Russian border, Russian's perception about benign intentions of the United States will fade away. Then, as Waltz argued, this will have some particular undesirable consequences: [76]

Firstly, it will put additional costs on NATO which will be assumed mostly by the United States. Secondly, it will probably provoke Russia in a balancing effort and which in turn alienates Russia and nudges this country toward China. In a contrary scenario, increased military spending of Russia may have similar side effects in other regional settings since Russia has neighborhood with China and Japan. When Russia starts military improvement, these two countries may perceive a threat from Russia and may engage military build-up. Therefore Waltz and most of the other realists diverged completely from American administration's policies and mentioned the absence of rationale behind the idea of perpetuation of unipolarity, which requires the United States to avoid the emergence of new great powers.

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[72] Huntington, Samuel P., 1994, "America's Changing Strategic Interests", in Betts, Richard K., *Conflict After the Cold War: Arguments on Causes of War and Peace,* New York: Macmillan, p.508.
[73] Waltz, 2000, *op-cit*., p.1.
[74] In his masterpiece, Waltz contended that "theory, as a general explanatory system, cannot account for particularities." See Waltz, 1979, *op-cit*, p. 118.
[75] Waltz, 2000, *op-cit*., p.5.
[76] Waltz, Kenneth N., 2000, "Structural Realism after the Cold War", *International Security*, Vol. 25, No:1, pp. 5-41.

In the challenging atmosphere of the new century where United States had become the dominant superpower like a hegemon, another realist scholar made a great contribution to neo-realism. By introducing an explanation for the behaviors of revisionist states, Mearsheimer did not supersede but complement Waltz's theoretical approach in his masterpiece.[77] In his 'offensive realism' Mearsheimer builds his theory on neo-realist arguments such as security seeking states in an anarchic international environment and a competition for power in order to guarantee survival. Different from Waltzian structural realism, Mearsheimer emphasized that power maximization for security is the main motivation of states and clarified the vague security maximization understanding of neo-realism. Mearsheimer's point about power is also in conformity with what Gilpin argued two decades ago. In 'War and Change in World Politics', Gilpin argued that leading great power "will attempt to change the international system if the expected benefits exceed the expected costs."[78]

In other words, instead of defensive realists' status quo oriented way of maximizing security, states prefer to maximize their share of world power in which the ultimate goal is to be the hegemon in the system by searching for opportunities to gain power at the expense of others.[79] In the way of global hegemony, the initial step of a state is to seek regional hegemony. The second step of a great power is to maximize the amount of the world's wealth that the country controls. Developing a powerful land forces accompanied by nuclear capabilities constitute the next two steps necessary of the path to global hegemony.[80] In short, there are no status quo powers in Mearsheimer's world and all great powers are revisionist. Therefore, potential hegemons always aspire to be hegemons, and they will not stop increasing their power until they succeed. From this point of view, Mearsheimer enlarged the scope of neo-realist theory by introducing a theoretical rationale for the behavior of revisionist states.[81]

[77] Mearsheimer, John J., 2001, *The tragedy of Great Power politics,* New York: W.W. Norton & Company.
[78] Gilpin, Robert, 1981, *War and Change in World Politics,* Cambridge: Cambridge University Press, pp.50-106.
[79] Mearsheimer, 2001, *op-cit.* p.21, p.410.
[80] *Ibid.*, pp. 138-147.
[81] Snyder, 2002, *op-cit*., pp.152-158.

By the historical cases that Mearsheimer examined as a test of his theory of offensive realism, he clearly put forth that only regional powers are status quo oriented and great powers are revisionist.[82] Most of these historical cases proved the theory by showing sufficient evidence that great powers do not engage self-denial as long as they have sufficient capability to shift the balance in their favor.[83] However, two cases, namely the United Kingdom and the United States, show difference from other examples by not searching for domination despite the existence of sufficient capabilities. The reason of not attempting to conquer territory in Europe or Asia by these two powers is attached to the lack of territorial neighborhood. For Mearsheimer, the English Channel for United Kingdom and Atlantic and Pacific Oceans for the United States raised difficulty of projecting military forces across the water.[84] Since none of the great powers have ever had the military capability to become a global hegemon, regional hegemony emerges as the ultimate goal of powers. As a result of this, both United Kingdom and the United States behaved as an 'offshore balancer' in order to inhibit the rise of any other great power to emerge as a regional great power. [85]

In addition to balancing, Mearsheimer argued buck-passing[86] as an alternative strategy of states against aggressors. If possible, passing the buck is an advantageous strategy because it protects the buck-passer, but the potential hegemon and balancing countries will be torn in case of a war. As Mearsheimer argued, the historical examples are various.[87] From this point of view, offensive realism also regards bandwagoning as contradictory with the basic principle of realism that states are searching for maximizing their relative power. Therefore, great powers rarely bandwagon.[88] In light of all these explanations, offensive neo-realists have developed some conclusions about the developments took place in international politics. First of all, they clearly observed that Cold War allies of the Western world are drifting apart as a result of structural developments. In other words, the

[82] The cases examined are: Japan from 1868 to 1945; Germany from 1862 to 1945; the Soviet Union from 1917 to 1991; Italy from 1861 to 1943; Great Britain from 1792 to 1945; and the United States from 1800 to 1990.
[83] Mearsheimer, 2001, op-cit., pp. 172-209.
[84] *Ibid.*, pp. 234-238.
[85] *Ibid.*, pp.238-266.
[86] Buck-passing describes the efforts to stay out from direct conflict with the aggressor while another state directly involves a conflict or war with potential hegemon.
[87] *Ibid.*, pp.267-359.
[88] Snyder, 2002, *op-cit*., pp.162-3.

disappearance of Soviet threat, changing trade relationship between Europe and the United States as well as demographic changes and elite perceptions have diverted the transatlantic allies from each other.[89] The improvement of such a divergence will naturally end up with an increase in defense capabilities of potential great powers of Europe. As Mearsheimer contended:

> The United Kingdom, France, Germany and Italy are slowly but inexorably realizing that they want to provide for their own security and control their own destiny. They are less willing to take orders from the United States than they were during the Cold War. Japan, too, is showing signs of independent behavior. Moreover, the American commitment to defend Europe and Northeast Asia shows signs of weakening… America's military role in those two strategically important areas is likely to diminish, not increase.[90]

The signs of transatlantic friction might be evaluated as a balancing against the preponderance of United States. However, by the turn of the century, many neo-realists were questioning the existence of a balancing effort against United States. Generally speaking, the discussions were not centered on whether the structure will turn into a multipolar structure, but rather the reasons for the absence of balancing against the United States. In other words, with a few exceptions, most of the realists have agreed on that the structure of international politics will gradually turn into multipolarity. However, the discussion is about the reasons of underbalancing. Explanations of realists are various ranging from the benign intentions of United States to the domestic politics of other states.

One of the most commonly expressed explanation for the lack of balancing against a potential global hegemon is the power differences between actors. As Wohlforth examines in detail, the qualitative and quantitative gap between the superpower and other potential great powers is unprecedented. The United States is the only state in modern international history with a clear preponderance in all the underlying components of power: economic, military, technological and geopolitical.[91] Therefore, because of the massive gap in

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[89] Despite neo-liberals such as Nye argued that the cleavages between Atlantic partnership is temporary, most realist analysis have discovered the opposite. See Nye, Joseph, 2000, "The US and Europe: continental drift?", *International Affairs,* Vol. 76, No:1, pp.51-59; Walt, Stephen M., 1999, "The Ties That Fray: Why Europe and America are Drifting Apart?", *National Interest*, Vol. 54, pp. 3-11; Cohen, Roger, "Storm Clouds ove US-Europe Relations", *New York Times,* March 26, 2001.

[90] Mearsheimer, 2001, *op-cit.,* p. 391.

[91] Wohlforth, William C., 2000, "The Stability of a Unipolar World", in Brown, Michael, et.al., *America's Strategic Choices: Revised Edition,* Cambridge, Massachusetts: The MIT Press, pp. 273-290.

capabilities, any countervailing challenge must be strong enough to produce a structural change. A second reason that Wohlforth argued is the geographical advantage of the United States against the threat of others. He termed Atlantic and Pacific oceans as the most trustworthy allies of America, therefore highlighted the difficulty of posing threat on the United States.[92] As a result, the U.S. role as an offshore balancer helps to prolong the unipolar moment.

Mearsheimer stressed another important element of great power behavior, which causes off-balancing within the international system. Mearsheimer reminded that "the United States has no appetite for conquest and domination outside of the Western Hemisphere" which is in conformity with the neo-realist premise of "offshore balancers do not provoke balancing coalitions against themselves."[93] However, Mearsheimer also added that this does not mean that Americans will not pose any threat to other major powers. "United States is also sure to pursue policies that will raise doubts about whether it is a wise and reliable ally, if only because U.S. interests are not identical to those of its allies" as in the case of Kosova Crisis of 1999.[94] In addition, Mearsheimer as well as some other scholars argue that the American security commitment is an important determinant on other states' policy preferences. According to this view, others prefer the United States not to resort offshore balancing and withdraw from the continent. Therefore, they were reluctant to balance the United States.[95]

In the early 2000s, there were also some liberal institutionalist scholars interested in explaining the absence of balancing. John Ikenberry, for instance, argued that institutional arrangements bind the US and allies together, which limit the superpower's ability to either threaten or abandon its major allies.[96] Ikenberry's argument was suffered from an institutional plea which realism clearly puts forth: Institutions reflect the interests and policies of the states that create them. Similar institutionalist approaches were falsified

[92] *Ibid.*, p.296.
[93] Mearsheimer, 2001, *op-cit*., pp. 391-2.
[94] *Ibid.*
[95] See, Mearsheimer, 2001, *op-cit.,* Chapter. 10; Wivel, Anders, 2008, "Balancing against threats or bandwagoning with power? Europe and the transatlantic relationship after the Cold War", *Cambridge Review of International Affairs,* Vol.21, No:3, pp. 289-305.
[96] Ikenberry, G. John, 1999, "Institutions, Strategic Restraint, and the Persistence of American Postwar Order," *International Security,* Vol. 23, No:3, pp. 47-78.

after the American invasion of Iraq in 2003 without having a mandate from the United Nations.

Another explanation for the absence of any serious attempt to balance U.S. power has been expressed by another prominent figure of neo-realism. Stephen Walt argued that explanations of Waltzian structuralism about the half-hearted and ineffective balancing efforts were unable to explain the post-Cold War period. On the other hand, Walt's 'balance of threat' theory suggests an alternative that help to explain current 'situation of off-balance'.[97] In the late 1980s, Walt developed a theory which he claimed that it fills the gaps within the structural theory.[98] Walt examined the European diplomatic history and the U.S. foreign policy as well as the alliance commitments in the Middle East and concluded that 'balance of threat theory' can best explain the international politics. According to this theory, states balance against the states that pose the greatest threat even if that state is not the most powerful in international arena. Whereas balance of power theory centered on imbalances of power, Walt's theory predicts that when there is an imbalance of threat, states will increase their own capabilities or form alliances. Similar to the criteria defined in balance of power theory, Walt argued the existence of four criteria which states use in threat perception:

First one is state strength which is determined by the size, population and economic capabilities of potential aggressor. Geographical proximity of the threatening state, its offensive capacities as well as aggressive intentions are the other criteria that states evaluate when they perceive a threat from another state. [99] In short, Walt's balance of threat theory argues that states do not necessarily balance against the most powerful, yet against the one that they perceive threat.

In his explanation for the post Cold-War balancing, Walt again resorted to the balance of threat theory. In doing so, Walt did not argued that balance of power is a misleading

[97] Walt, Stephen M., 2002, "Keeping the World "Off-Balance": Self-Restraint and U.S. Foreign Policy" in Ikenberry, G. John, *America Unrivaled: The Future of the Balance of Power,* Ithaca: Cornell University Press, pp. 124-6.
[98] The initial idea about the balance of threat theory was presented in 1985. See Walt, Stephen, 1985, "Alliance Formation and the Balance of World Power", *International Security,* Vol.9, No: 4. Walt developed the theory in his famuous book. See Walt, Stephen M., 1987, *The Origins of Alliances,* Ithaca: Cornell University Press.
[99] Walt, 1987, *op-cit.,* pp.147-180.

theory, but incomplete because power is only one of the four determinants of balancing. His explanation for the absence of balancing against U.S. is mainly based on the fact that other major powers do not perceive United States as an aggressor threatening their security. In his analysis, Stephen Walt initially questioned whether the level of U.S. power is quite above the cumulative power of other major states or not. Besides this, being geographically located far from other regional settings decreases the level of other's threat perception. Despite its preponderance in military and economic power, it is not so easy for the United States to implement offshore operations. This fact, according to Walt, helps the United States to be regarded as a benign superpower. As the balance of threat theory envisages states that acquire specific military and/or military capabilities will pose, ceteris paribus, greater threat to the security of other powers. In other words, if a state has more offensive military capabilities, others will be more inclined to perceive threat from that country. In that respect, the power projection capabilities of America are quite threatening for the rest of the major powers. An overt example, according to Walt is the reaction of Russian, Chinese and European leaders against the national missile defense strategy of the U.S.

Furthermore, the First Gulf War, Kosovo Crisis of 1999 and war in Afghanistan were clearly put the ability of United States to project over long distances. As a final criterion, Walt questioned the perception of U.S. intentions by the others. When compared with previous dominant powers, United States has depicted a 'comparatively benign' power in its relations with other regional actors. Considering all these criteria, therefore, it is not a matter of what United States has, how others respond will depend actually on what they think the United States will do. In short, Walt contended that the non-existence of balancing is a consequence of calculation of American threat by major powers on the basis of these criteria. The final evaluation revealed that perception of major powers about the U.S. intentions is currently positive, yet it may change as a result of a change in America's policy preferences in the future.[100]

In light of these neo-realist remarks on post-Cold War structure, some policy recommendations were developed by neo-realist scholars. Since states search for more

[100] Walt, 2002, *op-cit.,* pp. 133-141.

power for more security, the dominant state's search for hegemony may be understandable in a unipolar world. Therefore, any attempt (including unilateral actions) by the United States in order to develop an American hegemony might be expected as a probable outcome.

However, the prominent neo-realist theorists reached a consensus on a different approach, which suggests more security for the United States. First of all, the role of America as a pacifier is vitally important in different regional settings. In Europe, the absence of U.S. forces may pose a security threat to Germany and cause rapid armament in Germany. In turn, Russia, France and at a lesser extent UK would become anxious about Germany's intentions. This process would go to the proliferation of nuclear arms, which means a turn from benign bipolarity to unbalanced multipolarity in Europe. The same scenario may be relevant for Northeast Asia in case of a powerful hegemonic development of China. Because China would become a more formidable superpower than the U.S., America should better contain China rather than searching to integrate this country to the world economy.[101]

In short, according to neo-realist arguments, the United States should not follow an idealistic approach that would help the Chinese economy to develop incredibly and should provide a balancing mechanism both in Europe and Northeast Asia in order to prohibit the emergence of a regional hegemon, which would turn into a peer competitor to the United States. This task will probably exceed the economic, military, demographic and other capabilities of America in a near future and therefore, the United States should not provoke any balancing efforts and coalitions by implementing neo-conservative policies.[102] In doing so, the United States should use its power with forbearance, and refrain if possible. Moreover, it should resort multilateralism more frequently and take other major powers' interest into consideration. Thus, United States should emphasize defense and eschew offense in its relations with others in order to keep the world 'off-balance'.[103]

[101] Mearsheimer, 2001, O*p-cit.,* pp. 392-402.
[102] Waltz, 2000, *Structural Realism…,* pp. 35-39.
[103] Walt, 2002, *Op-cit.,* pp. 141-152.

1.5.3. Post 9/11 World and Theoretical Implications

During the discussions among scholars of international politics about the durability of unipolar structure and neo-realist explanations about the post-Cold War developments, a dramatic but historically unprecedented event took place in September 2001. Formerly perceived as a 'safe haven', the United States has turned into a potential target that can be shot on its own soil. The ambiguity of the source of terror inhibited the superpower to reciprocate with a massive assault. However, the 9/11 attacks have a much severe consequence: the terrorist assaults on strategic American targets created an incentive on the Bush Administration to pursue a more neo-conservative path which has been highly criticized by most of the neo-realists.[104] In the lack of a specific target to counteract terrorists, the U.S. foreign policy makers decided to march in Afghanistan in order to destroy the Al-Qaeda camps as well as its Taliban supporters.

The initial American operations started just one month after the 9/11 attacks without a UN mandate and the only supporter was the United Kingdom.[105] Within the first year of the Afghanistan operations, American leadership decided to continue 'the war on terror' by fighting with 'the most prominent supporter' of anti-American activities, who has been alleged by America to possess nuclear weapons.[106] Despite vigorous efforts of many of the major powers to stop or at least delay the American invasion of Iraq, United States has started the conquest of Iraq in early 2003. The American invasion, of course, did not receive a support from UN Security Council.

In light of these developments, another theoretical debate emerged in academic circles. The neo-realist arguments were once more questioned on the basis of increased American unilateralism and absence of any counter-balance efforts by other countries. Just after both

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[104] Neo-realits are generally opposed to aggressive policies such as war in Iraq, which entails the danger of high U.S. ccasualties, significant civilian deahts, a heightened risk of terrorism or increased hatred of the U.S. in the Arab and Islamic World. In that sense, it is not interesting that most of the forecasts of neo-realists have taken place during the War in Iraq. See Mearsheimer, John J. and Walt, Stephen M., 2003, "An Unnecessary War", Foreign Policy, Jan/Feb. 2003, No: 134, pp. 50-9.

[105] Ameircan's argued that they acted with a "clear right to self defense" under Article 51 of the UN Charter. See "Bush announces opening of attacks", 2001, *CNN.* Retrived on September 18, 2009 from: http://archives.cnn.com/2001/US/10/07/ret.attack.bush/.

[106] Bumiller, Elisabeth and Dao, James, 2002, "Cheney Says Peril of a Nuclear Iraw Justifies an Attack", *New York Times,* 27 August 2002. Retrieved on September 18, 2009 from: www.nytimes.com/2002/08/27/international/middleeast/27IRAQ.htm

war in Afghanistan[107] and invasion of Iraq[108], United States has been blamed for ambitious plan to control the energy resources of the Middle East and the Caspian. Whatever the underlying reason of the United States, these two successive unilateral operations of the United States have irritated not only the potential rivals of the superpower, but also its Cold War allies. As a result of those intentions, the neo-realist theory would assume other major powers to develop a balancing strategy against the United States. As discussed above, the existing preponderant power of the United States when combined with unilateral acts with aggressive intentions, other major powers (including the European allies) should perceive a great threat of American hegemony.

However, there were no concrete examples of balancing efforts on the side of other powers. In such an atmosphere, some scholars searched again for the merits of non-balancing and reiterated the relevance of neo-realism by developed new explanations for the current situation. In efforts to explain the noticeable absence of balancing, Little found out that the meanings of the term 'balance of power' differs from one scholar to other. Some writers regarded the balance of power as an unavoidable byproduct of anarchy while some others perceived it as a unifying element of a stable and cooperative international society. After an intricate analysis on the approaches of prominent realist figures, Little contended that balance of power is not an immutable law of nature.[109] However, most of the liberal as well as realist believe that balancing is an indispensable element of international politics and the reasons of current situation of non-balancing should be clearly understood.

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[107] Gökay makes an analysis on the discussions about the "hidden intentions" of the United States in Afghan war. According to some comments, the plans for Ameiran offensive in Afghanistan were not resulted in as a response to September 11, yet existed prior to the terroist attacks. See Gökay, Bülent, 2002, "The Most Dangerous Game in the World: Oil, War and the U.S. Global Hegemony" in *Alternatives: Turkish Jorunal of International Relations,* Vol. 1, No: 2, pp. 47-68.

[108] There were severe criticism particularly from Islamic countries and a part of Europe that the intrinsic purpose of United States was to secure its oil demand. See Linzer, Dafna, 2004, "Poll Shows Growing Arab Rancor at U.S." *Washington Post,* July 23, 2004, A26. Walt also mentioned about polls showing a majority of other country citizens think that "the actual desire of America is to control Middle East reserves". See Walt, Stefen M., 2005, "Taming American Power", *Foreign Affairs,* Vol. 84, No:5, p.107. However, there were also opposite ideas that the most prominent motivation for the United States was security, not energy resources. See, Mueller, John, 2005, "The Iraq Syndrome", *Foreign Affairs,* Vol. 84, No: 6, pp. 44-54.

[109] Little, Richard, 2007, *The Balance of Power in International Relations: Metaphors, Myths, and Models,* Cambridge: Cambridge University Press.

One of the most interesting explanations about the balancing discussions clearly emerged in mid-2000s. Some scholars argued balancing to be implemented by other major powers, yet in a different form.[110] In an analysis of soft balancing, Paul argued that unilateralist strategies to prevent the emergence of a peer competitor at global level as well as the Middle East and Central Asia policies of the United States had already irritated the traditional allies in Europe as well as former enemies such as Russia or China. These second-tier major powers, on the other hand, have not engaged in forming countervailing alliances and/or arms build-ups as a balancing effort. These powers, according to Paul, are confident that United States will not directly pose threat because it is constrained "by a multitude of factors, including: internal democratic institutions, domestic politics, and above all, the possession of nuclear weapons by some second-ranking powers."[111] In that sense, they have employed an additional strategy to the existing bandwagoning, buck-passing and free-riding. These second-tier major powers engage in "soft-balancing, which involves the formation of limited diplomatic coalitions or ententes with the implicit threat of upgrading their alliances if the United States goes beyond".[112]

Another scholar has also concluded a similar argument about the activities of major powers and asserted that the major states and some other regional states are already engaging in the early stages of balancing behavior against the United States. The high costs of hard-balancing measures such as military build-ups or defense alliances enforce these countries to pursue more moderate means of balancing. These measures include indirect challenges such as using non-military means to delay, frustrate or undermine unilateral policies of the United States, mainly by resorting international institutions, economic statecraft and trade as well as diplomatic arrangements.[113] Both Paul and Pape underline main reasons for the lack of balancing. Paul argued that the liberal characteristics of U.S. political system and of its hegemonic behavior constitute one of the main reasons for non-balancing. He also stressed the absence of a counter military capability in the aggregate of

[110] In a previous analysis, Walt argued the possibility of "a host of lesser actions other states can still undertake in order to complicate U.S. calculations and constrainits freedom of action. See Walt, 2002, *op-cit.,* p. 128.
[111] Paul, T.V., 2005, "Soft Balancing in the Age of U.S. Primacy", *International Security,* Vol. 30, No: 1, pp. 46-47.
[112] Ibid., pp.47-8.
[113] Pape, Robert A., 2005, "Soft Balancing against the United States", *International Security,* Vol. 30, No: 1, pp. 7-10.

other states' possession as a second reason of non-balancing.[114] Since U.S. does not impose a direct threat to others' security, they do not prefer to risk their relations with the U.S. in a more interdependent world. "The fundamental goal of balance of power politics is to maintain the survival and sovereign independence of states in the international system; a related objective is not allowing any one state to preponderate".[115] In that sense, according to Pape, states do not prefer balancing the United States. Pape made a further analysis and explain the incapability of others by two main reasons:

Firstly, a balancing coalition against an extraordinary power requires including most or possibly even all of the second-tier major powers. Secondly, convincing all these powers to attend such an alliance is actually very difficult. Pape also agreed by Paul that the benign intentions of the United States that others perceive have contributed the continuation of current unipolar situation. However, the perception of others may easily change in a unipolar world. Since the threshold for a unipolar leader to be perceived as 'aggressive' is lower than a major power in a multipolar world, modest relative gains or unilateral policies of the unipolar leader may be regarded as 'threatening acts' by others.[116] Joffe has also contributed the soft balancing debate by arguing that soft balancing has begun with the collapse of Soviet Union in 1991. For Joffe, the earlier examples of soft balancing was seen when the United States regularly found itself alone on the discussions about ABM Treaty or the International Criminal Court.[117]

After examining the reasons of balancing vs. non-balancing, Pape analyzed types of balancing that may be implemented by other major powers if they perceive threat. The capability of other major powers in a unipolar structure is limited when compared to the leading country. Therefore, internal balancing is not a viable option for a major power since it entails a risk of a harsh response by the unipolar leader. The only reliable option, thus, is engaging in external balancing efforts, which entails serious difficulty of coordinating as well as the risks of entrapment or collective failure. In light of this,

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[114] Paul, op-cit., p. 48-51.
[115] Gulick, Edward Vose, 1955, *Europe's Classical Balance of Power,* Ithaca: Cornell University Press, pp.31-3.
[116] Pape, op-cit., pp.11-5.
[117] Joffe, Josef, 2003, "Gulliver unbound: can America rule the world?". *The Twentieth Annual John Bonython Lecture,* Sydney: Centre for Independent Studies. Retrived on 26 July 2009 from http://www.smh.com.au/articles/2003/08/05/1060064182993.html.

balancing against a superpower is a timely process because it requires high level of coordination among interests and collective action of second-ranked states. Pape's explanation about the steps of major powers' balancing efforts is quite helpful in understanding the situation:[118]

> The logic of unipolarity would suggest that the more aggressive the intentions of the unipolar hegemon, the more intense the balancing by second-ranked states, to the extent balancing is possible at all. If the unipolar leader does not pursue aggressively unilateral military policies, there should be little balancing of any kind against it. If, however, the unipolar leader pursues aggressive unilateral military policies that change how most of the world's major powers view its intension, one should expect, first, soft balancing and, if the unipolar leader's aggressive policies do not abate, increasingly intense balancing efforts that could evolve into hard balancing.

In light of the balancing behavior, the newly developed balancing trend in unipolarity is expected to be illuminated by neo-realists. Before that, one of the main neo-realist principles should be reminded. As Waltz argued that unipolarity appears as the least durable international structure, "a dominant power may behave with moderation, restraint and forbearance. Even if it does, however, weaker states will worry about its future behavior… As nature abhors a vacuum, so international politics abhors unbalanced power. Faced by unbalanced power, states try to increase their own strength or they ally with others to bring the international distribution of power into balance."[119] When the reality of balancing combined with Walt's explanation of balance of threat[120], the relative tranquility of post-Cold War period becomes more meaningful. In more concrete terms, the major powers –namely Russia, China, Japan, Germany, France and to some extend the United Kingdom and Italy- are intrinsically uneasy with the current state of unipolarity. However, the comparably moderate foreign policy intentions of the leading unipolar power, the United States, do not provoke them to follow a direct balancing policy.[121]

On the other hand, this does not mean that the U.S. is a completely benign power working purely for civilian purposes. Rather, Americans have pursued quasi-imperial policies in a different form when compared with previous hegemonic powers. Put

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[118] *Ibid*., pp. 16-18.
[119] Waltz, "Evaluating Theories", 1997, *American Political Science Review,* Vol. 91, No:4, p. 915.
[120] Walt, 2002, *op-cit.*, pp.127-9.
[121] Paul, *op-cit.*, pp. 53-5; Pape, *op-cit.,* pp.19-20.

differently, 'incoherent empire' or 'reluctant superpower' of the post-Cold War follows a 'soft imperialist' path. [122] When this trend combined with post 9/11 policies of Bush administration, the other major powers (probably except for the United Kingdom) has become more anxious about American intentions. Pape explained this period as "the United States' changing reputation". [123]According to some neo-realist scholars, the result of U.S.'s change in policy towards a preventive war has been an intensification of balancing efforts by other major powers in a form of 'soft balancing'. Pape defined soft balancing as "the utilization of tools to make a superior state's military forces harder to use without directly confronting that state's power with one's own forces."[124]

In other words, soft balancing involves strategies to stop or delay the use of force by using non-military means. Walt made a similar definition of soft balancing: "conscious coordination of diplomatic action in order to obtain outcomes contrary to U.S. preferences, outcomes that could not be gained if the balancers did not give each other some degree of mutual support."[125] In line with these definitions, Paul argued that second-tier powers have been pursuing limited, tacit or indirect balancing strategies against the United States. They frequently prefer to use coalition building or diplomatic bargaining within international institutions. Denying the UN approval to U.S. led interventions by using the veto power in UN Security Council is the most prominent example of this sort. This strategy helps major powers to challenge the legitimacy of U.S. interventions. Moreover, the absence of UN approval led many potential allies to refrain from supporting an action without 'collective legitimation'. In this respect, Paul examined the American intervention in Kosovo in 1999 and concluded that although soft balancing efforts of mainly implemented by Russia and China did not prevent an intervention, they were able to influence the post-intervention settlement. [126]

In a similar analysis for the invasion of Iraq in 2003, Paul put forth that the reaction of Germany, France and Russia against the American and British efforts for a UN support to

[122] Mann, Michael, 2003, *Incoherent Empire,* London: Verso, pp. 1-18.
[123] Pape, *op-cit.* p. 23-5.
[124] *Ibid.,* p. 36.
[125] Walt, Stephen M., 2004, "Can the United States Be Balanced? If So, How?", Annual meeting of the American Political Science Association, Chicago: APSA. Retrieved on 15 June 2009 from http://www.allacademic.com/meta/p59968_index.html
[126] Paul, *op-cit.,* pp. 58-64.

invasion was an example of soft balancing. This unofficial coalition engaged in an intense diplomatic balancing, which resulted in an internationally illegitimate intervention made by the U.S. One of the main motives behind this reaction was the concerns of European major powers that "the Westphalian Sovereignty norm will be challenged by the U.S. intervention in Iraq".[127] Different from Kosovo, American intervention in Iraq received opposition by a larger group of countries including the European major powers, which in turn decreased the legitimacy of the operation into question.

Pape had also depicted a similar approach. He elaborated four main mechanism of soft balancing, which are: territorial denial, entangling diplomacy, economic strengthening and signaling to resolve to participate in a balancing coalition. Different from Paul, Pape believed that major regional actors are also contributing the balancing efforts. For instance, Turkey and Saudi Arabia firmly denied the U.S. to access their territory and posed difficulty to the United States in logistic terms. Turkey was strategically important for an effective operation and the U.S. was expecting Turkey to accept its request to use its territory. Turkey's reluctance in decision making process and refusal at the end not only increased the cost of North Iraq operation for the United States but also delayed the intervention. What Turkey and Saudi Arabia did, according to Pape, is actually soft balancing by using territorial denial. In Pape's approach, a second mechanism of soft balancing took place when France, Germany and some other major European powers applied institutional procedures in the UN to prevent or at least delay the intervention. In other words, "French, German and Russian policies on Iraq was not for saving Saddam, but containing the American power, liberated from the ropees of bipolarity"[128].

Furthermore, Chinese and South Korean efforts to elevate their role in diplomatic negotiations with North Korea have been regarded by Pape as a similar diplomatic entangling mechanism.[129] Moreover, Pape argued also that soft balancing may be more ambitious in two ways. With respect to first one, Pape required other states to press hard for UN rather than the United States to oversee the administration of oil contracts in Iraq in order to limit the U.S. freedom in Iraq. In addition to this, some activities in the field of

[127] *Ibid.,* pp. 64-69.
[128] Joffe, *op-cit,* pp. 16-18.
[129] Pape, *op-cit.,* pp. 36-41.

economics may also help to a decrease in the relative power of the United States. A clear example may be to have a consensus on buying oil in Euros. The GNP of the United States will be inevitable affected from currency change at around 1 percent.[130] Increasing economic relations between China and the EU may further provide similar results.[131] Therefore, economic strengthening of others may be another way of soft balancing, which may also give some clue to the U.S. administration about the balancing efforts of others. In line with this, Pape envisages a final mechanism of soft balancing which will help others to control U.S. Also as step of a shift from soft balancing to the traditional hard balancing, other states may signal to resolve in a balancing coalition. Encouraging and support to U.S. opponents such as Iran or North Korea can be the examples of giving a signal to the superpower. [132]

As Paul noticed the continuation of soft balancing efforts culminated in a partial victory in June 2004 and enforced the United States to adopt a UN resolution[133], which delivered partial sovereignty to the Iraqi government. This was a result of diplomatic bargaining among the United State, United Kingdom, France, German, and Russia. In that sense, Paul argued that hard balancing is not automatic in the anarchic world, but is a function of major power reaction against the hegemonic behavior of leading state.[134] Therefore, as long as they receive threat from the U.S., they will be more inclined to balance the superpower. This is also in conformity with what Walt envisages for soft balancing:

> Soft balancing could also lay the groundwork for more fundamental challenges to U.S. power. States that coordinate positions on minor issues may become more comfortable with each other and better able to collaborate on larger issues, and repeated successes can build the trust needed to sustain a more ambitious counter-hegemonic coalition. Thus, successful soft balancing today may lay the foundations for more significant shifts tomorrow. If other states are able to coordinate their policies so as to impose additional costs on the United States or

[130] *Ibid.,* p. 42.
[131] Cui, Zhiyuan, 2004, "The Bush Doctrine: A Chinese Perspective", Held, David and Koenig-Archibugi, Mathias, *American Power in the Twenty-first Century,* Cambridge: Polity, pp. 241-251.
[132] Pape, *op-cit.,* p.42.
[133] United Nations adopted a resolution stating "Security Council Endorses Formation of Sovereign Interim Government in Iraq; Welcomes End of Occupation by 30 June, Democratic Elections by January 2005. See UN Resolution 1546 (2004), SC/8117, retrieved on 15 June 2009 from: http://www.un.org/News?Press/docs/2004/sc8117.doc.htm.
[134] When the others perceive that leading superpower is a revisionist state rather than status quo power, the balancing efforts begins to emerge. Paul, *op-cit. 70-71.*

> obtain additional benefits for themselves, then America's dominant position could be eroded and its ability to impose its will on others would decline.[135]

On the other hand, some other scholars criticized the ideas about soft balancing and argued that there is no balancing at the current international structure. Brooks and Wohlforth criticized defenders of soft balancing on the basis of the lack of empirical basis and argued that any behavior that complicates the U.S. policies as soft balancing. The analysts, according to them, failed to address alternative explanations for the constraint actions of other major states. In that sense, Brooks and Wohlforth explained four types of explanations instead of soft balancing: (1) economic interests, (2) regional security concerns, (3) policy disputes and bargaining, and (4) domestic political incentives.[136]

The first alternative explanation of Brooks and Wohlforth argues that economic gains of a state and/or domestic interest groups or business elites may cause the actions that constraint the U.S. In that sense, Moscow's eagerness to sell weaponry to Beijing and New Delhi is not something related to an endeavor to balance the U.S. threat, but rather because of economic expectations of the Russians. Similarly, Brooks and Wohlforth further agued that since Iranians pay cash and nuclear projects costs high, Moscow-Tehran relations should be examined in the same manner rather than discussing soft balancing[137].

Secondly regional and transnational challenges such as organized crime, terrorism, drug trafficking and refugee flows may cause incentives for major powers to enhance their power capabilities. Therefore regional challenges that they face may enforce them to take precautions which also limit the unilateralist actions of the United States. The rapprochement among Russia, China and India under the Shanghai Cooperation Organization is an obvious example. Instead of explaining it as a balancing effort, Brooks and Wohlforth underlines the importance of regional challenges such as the need for confidence building among the new states in the region, resolution of border disputes, Islamic extremism and other minority issues. Furthermore, regional challenges are also one of the numerous reasons for increasing relations between Russia and Iran. Moscow, in that

[135] Walt, Stephen M., 2004, *op-cit*.
[136] Brooks, Stephen G. And Wohlforth, William C., 2005, "Hard Times for Soft Balancing", *International Security,* Vol. 30, No: 1, pp. 72-80.
[137] *Ibid.,* pp. 88-90.

sense, needs Iranian cooperation at least in resolving the question of exploitation of natural resources in the Caspian.[138]

Thirdly, sincere domestic political concerns of politicians of regional actors or major powers may invoke actions constraining the United States. One of the examples for this trend is the European Union's efforts to develop military capabilities free from U.S. influence. Brooks and Wohlforth, regard European efforts in developing a military capability as an issue of domestic politics because independent EU foreign policy is popular among public opinion in Europe. In addition, they also regard EU's efforts as a result of regional security concerns rather than balancing. Furthermore, the opposition of traditional allies in the case of Iraqi War was not regarded as a soft balancing effort by Brooks and Wohlforth as well. The domestic political concerns of Chancellor Schröder and Prime Minister Erdoğan were the main reasons of strict opposition in those countries.[139]

Last but not least, disagreement with specific U.S. policies rather than pure balancing incentives may also present another reason for actions that constrain the United State. The most obvious example of this forth explanation is the French opposition to the Iraqi War. According to Brooks and Wohlforth, the main reason of French stance was not necessarily to check the increasing U.S. influence and power, but to enhance France's ability to bargain over specific policy responses to global security issues. In short, these four explanations put forth by Brooks and Wohlforth questioned the relevance of soft balancing discussions.

Moreover, Lieber and Alexander have also criticized defenders of soft balancing. According to their view, the other major powers are not implicitly balancing the superpower but they engage in a behavior of typical diplomatic friction. Moreover, improving U.S. relations with major powers such as China, Russia, India and some other regional actors such as Egypt, Jordan, Pakistan and Saudi Arabia may prove the opposite of balancing. With respect to this understanding, Lieber and Alexander pointed out four of

[138] *Ibid.,* pp. 83-6, 88.
[139] *Ibid.* Pp. 91-101.

the explanations of soft balancing and argued that these are examples that cannot effectively be distinguished from routine diplomatic friction.[140]

Their first criticism is about entangling international institutions as a way of soft balancing. With reference to Schweller, they reiterate a realist claim which argues incapability of institutions "to be autonomous and to take decisions binding on strong states".[141] Since powerful state can control institutions, it is unreasonable to expect them to restrain the powerful state. Moreover, entangling institutions could be regarded as soft balancing if any of the major powers sought to use institutions to block the American intervention or at least to declare the invasion as an illegal act.

Lieber and Alexander secondly criticized the lack of validity about the assumption of economic sanctions implicitly implemented on U.S. as a way of soft balancing. They concluded that there is no serious study about the impact of oil sales in Euro on American economy. Moreover, they reminded that the United States, with its huge market, constitutes an attractive trade partner those who are assumed to be in a balancing effort.

Thirdly, Lieber and Alexander argue that territorial denial as a way of soft balancing is not a proper understanding of the current situation. According to their view, the diplomatic developments about new offshore bases run contrary to the assumptions of soft balancing. "Since September 11 the United States has established new bases and negotiated landing rights across Africa, Asia, Central Asia, Europe and the Middle East."[142]

Finally, supporting the opponents of U.S. as a way of soft balancing is also criticized by Lieber and Alexander. Similar to Brooks and Wohlforth, they also contended that these activities may be related to other causal motives. In more concrete terms, economic benefits may be the main motivation of Russia to support the Iranian nuclear program rather than a vague balancing effort. Similarly, support of South Korea to North may be

[140] Lieber, Keir A. and Alexander, Gerard, 2005, "Waiting for Balancing: Why the World is not Pushing Back", *International Security,* Vol. 30, No.1, pp. 109-115.
[141] Schweller, Randall, 2001, "The Problem of Interantional Order Revisited: A Review Essay", *International Security,* Vol. 26, No:1, p. 182.
[142] Lieber and Alexander, *op-cit.,* p. 128.

evaluated as a regional security motivation rather than explaining by a pure balancing logic.[143]

In sum, according to Lieber and Alexander, events used in explaining the presence of soft balancing were typical in history and there is actually no balancing in unipolar system. Their explanation for this absence lies behind the "highly selective but not broadly threatening grand strategy of the U.S. in the post 9/11 world"[144]. In that sense, other powers perceive the power of United States as indispensable for defeating the shared threats of nuclear proliferator states and global terrorist organizations.[145]

As a reaction to criticisms on explanations about the soft balancing efforts of major powers, some other scholars of international politics declared their support to Walt, Paul, Pape and other neo-realists arguing the existence of balancing against the U.S. Robert Art, for example, replied both Brooks and Wohlforth as well as Lieber and Alexander and criticized them for conceptualizing balancing in a very narrow manner. His critics centered on two cases that depict the existence of balancing in the prevailing unipolarity. One of them is Chinese balancing, which Art evaluated as internal efforts and the other is European Security and Defense Policy of the EU, which is regarded as external effort by Robert Art.[146]

In his counter argument, Art stated that even if Russian arms sales to China is not motivated by balancing, Chinese intention could not be limited to have a bargaining power over the Taiwan Strait as Brooks and Wohlforth argued. Moreover, Art also mentioned that "Russia is aware of the effect of its arms sales on China's military capability"[147]. Art also argued that Brooks and Wohlforth misunderstood balancing by evaluating China's cooperation with U.S. as an anomaly for great power balancing. Mixing balancing and cooperation with another major power was also implemented as a policy choice by the

[143] *Ibid.,* pp. 129-30.
[144] *Ibid.,* p. 133.
[145] *Ibid.,* pp. 130-3.
[146] Art, Robert et.al., 2005/06, "Correspondence: Striking the Balance", *International Security,* Vol. 30, No. 3. pp. 177-8.
[147] *Ibid.,* p.178.

United Kingdom against Germany during the second half of 1930s. Therefore it is not an anomaly.[148]

A second point that Art is diverged from Brooks and Wohlforth as well as Lieber and Alexander is about European balancing efforts. According to him, "Europeans are at an earlier stage of balancing against the United States than China and have less to show for it"[149]. Art also criticized those scholars for ignoring the consequences on balancing if Europeans achieve their targets in ESDP.[150] Moreover, the argument on non-exisitence of balancing efforts by the Europeans that based on their low military spending levels is not relevant because their perceptions are different. China prefers internal efforts, while EU members are engaged in external efforts. In other words, they do not increase their military spending at member state level, but they prefer to pool their capabilities together under a new type of European alliance. Therefore, they are balancing through external alignment.[151]

In conclusion, some current steps of major powers actually deserve to investigate from the lenses of neo-realist theory. These behaviors were not present prior to the increased American aggression with the emerging unipolar structure of the post-Cold War era. In that sense, Christopher Layne's words may help to conclude:

> At the end of the day, what the administration trumpets as 'victory' in the Persian Gulf may prove, in reality, to have pushed NATO into terminal decline, given the decisive boost to the political unification of Europe (at least the most important parts of it), and marked the beginning of the end of America's era of global preponderance. [152]

Particularly the 9/11 attacks and U.S. intervention to Iraq further complicated the debate on balancing. Therefore, explaining the anomaly with a new concept of soft balancing may be regarded as acceptable.

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[148] *Ibid.,* pp. 178-80.
[149] *Ibid.,* pp. 180-1.
[150] *Ibid.,* p.180-1.
[151] *Ibid.,* p. 194-5.
[152] Layne, Christopher, 2003, "America as European Hegemon", *National Interest,* Issue 72, p. 28.

1.5.4. Explaining Energy Politics in Europe and Turkey's Role from a Neo-realist Perspective

Some of the existing policies and activities of European countries in the area of energy evaluated with respect to the fundamental principles of neo-realism. As it is obviously put forth, the behaviors of European Union members in particular and Union in general have always been in conformity with the main arguments of neo-realism. Therefore, neo-realism seems to be a proper tool for examining European energy structure and Turkey's contribution within this scheme. In doing so, the developments in theory after the end of the Cold War should also be taken into consideration. The energy policy of member states, therefore, should be evaluated with reference to the current debate on balancing. In other words, all the arguments that neo-realism put forth may help someone to explain the current developments in energy security policies at European level.

Since this study has a neo-realist conceptual framework, there will be two levels of analysis: First one is the unit level analysis which evaluates the relations between individual actors and their energy policy choices. Second one is the system level analysis which considers the impact of system on unit behavior. In more concrete terms, the energy requirement of Germany enforces the country to develop special relations with Russian Federation. The gigantic gas reserves of Russia and the proximity of that country to Germany are important elements of this rapprochement. However, these reasons are not sufficient to explain the particular relationship between Russia and Germany in which Germany has become heavily dependent on Russian gas. There must be some other motivators to explain the energy policies of major European powers. From this point of view, the interpretation of energy politics with respect to effects of the system on units should be taken into consideration.

In more concrete terms, the change in the structure of the system affects the policies of actors. Germany, previously preferred bandwagoning during the Cold War, has perceived the change in the structure of the system accurately and adopted its foreign policy to the new situation. Along with the change in foreign policy, Germany's priorities in energy policy have also changed. Therefore, the system level effects should be considered as imperatives for Germany's increased energy relationship with Russia. The positions of

other major European powers will be evaluated in a same manner in the following parts of this study.

Moreover, the role of Turkey should be evaluated from this point of view. Turkey's geo-strategic position may present a special role to the country in a new political structure. Some of the bigger member states of the EU may assume great power status in a potential multi-polar international structure. Located as a hub between rich energy sources and European countries, Turkey may become not only an important part of European energy strategies but also foreign policy. Therefore, Turkey's positioning within the political perspectives of European powers depends on the perception of those countries about a shift in the system to multi-polarity as well as their willingness to become a global actor.

European powers, through the EU, have assumed a global role and they are in a process of re-defining their relationship with the United States after the end of Cold War. From this point of view, Europeans have engaged in special relationship with oil and gas rich Middle East countries which are labeled as 'rogue states' by the U.S.[153] Since the Europeans need energy resources in the Middle East, Turkey may probably the most reliable partner not only as a bridge between Eastern resources and Western markets but also as an island of stability in the Middle East's chaotic political structure. Furthermore, neo-realist explanations about balancing and evolving through a multi-polar structure may also be confirmed by the increased efforts of Chinese government to make long-term energy agreements with African oil producers such as Sudan.[154] In short, all major powers are in search for securing the necessary energy resources which is at the heart of economic prosperity and military development.

In light of this international structure, all of the efforts by EU members, particularly the leading member states, will be evaluated with respect to neo-realist explanations in the further parts of this study. Moreover, their relations with Russian Federation will be considered as well as the role of China and other emerging great powers of a potential multi-polar international structure in the future. The impact of policies implemented by

[153] Ayman, Gülden, 2001, *Neo-Realist bir Perspektiften Soğuk Savaş Sonrası Yunan Dış Politikası: Güç, Tehdit ve İttifaklar*, Ankara: Stratejik Araştırma ve Etüdler Milli Komitesi, pp. 16-17.
[154] Goodman, Peter S., 2004, "China invests heavily in Sudan's oil industry", *Sudan Tribune,* 23 December 2004, retireved 18 September 2008 from http://www.energybulletin.net/node/3753.

energy producing countries will also be evaluated to understand the global energy politics. Finally, with respect to those developments in international level, Turkey's position in European energy politics will be detailed as well. The following chapter introduces European Union's energy outlook in general and then provides detailed information about energy policies of four of the main European powers: Germany, France, Italy and the United Kingdom. The policies expressed in governmental documents are mainly evaluated in that part as well as a general supply and demand structure of those countries. The next chapter provides an overview of Turkey's energy policies in the new energy environment. A particular emphasis is given to the current developments which may support Turkey's ambitious efforts to become a bridge of energy between East and West. Finally the last section will examine all the efforts of actors from a neo-realist point of view and offer some conclusions in line with this theoretical perspective.

CHAPTER II

ENERGY POLICIES OF THE EUROPEAN UNION AND MEMBER STATES

2.1. General

This part of the study does not solely concentrate on the energy policies of the EU, but also the policies of the Member States. All the areas related with energy policy cannot be under the control of EU, and the member states retain considerable discretion in implementing their own energy policies in line with their national interests.

This chapter starts with statistical data about European energy needs, consumption trends, own resources, the suppliers and future prospects. Then the policies and initiatives at EU level are examined in the second part of the chapter. The second part also covers the instruments that the EU utilizes in implementing its energy policy. The final part of this chapter evaluates energy policies of Member States. Since the Member States retain certain level of competences in this field, the positions of them in energy issues are worth to consider.

However, studying each and every detail of the energy policies of all member states would run the main argument of the thesis out of track. For this purpose, only the energy policies of the four leading states, namely Germany, France, Italy and the UK, are taken into consideration. These four countries are selected not only because they are the main

four energy consuming member states, but also they are described as the potential great powers in a regional multi-polar system in Europe.

2.2. Energy Outlook of the EU

Energy outlook of an entity may be evaluated from two main perspectives: Energy demand and energy supply. As far as the demand side is considered, the EU members are listed among the most energy consuming countries in the world. The aggregate demand levels of the EU members have also depicted a diversified profile among different member states. The new members have a consumption trend for the benefit of their economic and industrial growth, whereas the Western European countries have a different energy consumption trend based on transportation, heating, services sector and households mostly thanks to the modernization investments in industrial sectors. In short, EU countries require huge energy sources because of high level of consumption rates in member states.

The EU's own energy resources, however, are unable to meet the excessive demand level of the members. In order to satisfy the energy demand, EU imports most of its hydro-carbon energy resources from foreign countries. Even if Norway is not considered as a non-EU source of energy supply, almost half of the oil and natural gas are imported from other regions. As far as gas is considered, Russia and Algeria are the main suppliers, whereas Middle East and Africa has always been the main oil supplier for the European countries. Other energy sources such as coal, nuclear, renewable or solar energy will not be covered in detail because of several reasons.

Firstly, in attaining the other resources, European countries are not depended on external countries as in the oil or gas. The indigenous coal fields in Europe and the high technology that the European countries possess let them develop nuclear or renewable energy.

Secondly, these kinds of resources form only a trivial amount of the necessary energy need of European countries. Therefore, other type of resources does not help to explain the energy policy at European level and they are disregarded from the perspective of this study.

2.2.1. Energy Demand in the EU

As a union of 27 member states and with a population of nearly half a billion, the EU produces more than a quarter of the world's total economic activity.[155] Therefore, the huge amount of EU energy consumption is a logical consequence of this fact. For making a precise evaluation of the EU energy demand some information should be figured out. In that sense, areas of consumption, types of energy used and its efficiency as well as statistical data on energy should be taken into consideration. Generally speaking, the total energy need of European Union is around 1700 million tons of oil equivalent (toe). This amount equals to 3.6 toe per capita. This is a comparably modest consumption rate as far as the 7.8 toe/capita and 4.1 toe/capita figures of the US and Japan are respectively considered. When compared to the previous year, the 2005 figures depicted that the overall consumption within the EU remained stable for 2005. [156] As far as the product types are considered, with more than 650 million toe consumption, crude oil and equivalents are the mostly consumed product among all other gross inland energy consumption. Oil is followed by natural gas with an almost 450 million toe consumption rate, coal with around 310 million toe of which hard coal comprises 250 million toe and nuclear resources with 250 million toe consumption rates.

Table 2.1 shows the gross inland consumption rates for EU-25[157]. In some member states, the consumption rates decreased largely like in Lithuania, Finland or Cyprus, whereas some member states consume more than they did in the previous year. Latvia, Hungary and Portugal are among the member states that experienced the largest increases of energy consumption. On the one hand, Germany, France, United Kingdom, Italy and Spain are the members that consume most of the energy within the Union. On the other hand, Belgium, Luxembourg, Finland and Sweden depict the highest per capita consumption rates among all other EU members.

[155] BBC News, 20 June, 2003, http://news.bbc.co.uk/1/hi/world/europe/3007878.stm.
[156] The 2005 figures are relevant for EU 25. The late-comer members do not drastically change the energy need of the Union. For detailed information, see: Eurostat, *Energy Monthly statistics,* Issue number 7/2007.
[157] Malta is excluded since no monthly data available for this member state.

Table 2.1 Gross Inland Consumption			
	mio. toe	***toe/capita***	***% change 2005/2004***
EU-25	1637.2	3.6	0.0
Belgium	52.0	5.0	-2.0
Czech Republic	34.2	3.3	0.4
Denmark	16.9	3.1	-3.9
Germany	324.2	3.9	-1.1
Estonia	4.6	3.4	-1.4
Greece	30.2	2.7	1.1
Spain	139.5	3.2	2.1
France	257.3	4.2	-0.6
Ireland	15.4	3.7	2.6
Italy	181.9	3.1	2.4
Cyprus	2.2	2.9	-4.5
Latvia	3.5	1.5	7.5
Lithuania	7.8	2.3	-6.3
Luxembourg	4.6	10.1	1.3
Hungary	26.3	2.6	5.9
Malta	-	-	-
Netherlands	79.6	4.9	1.2
Austria	29.2	3.6	2.4
Poland	86.2	2.3	0.7
Portugal	24.3	2.3	3.1
Slovenia	6.3	3.1	3.1
Slovakia	28.5	3.4	2.2
Finland	27	5.2	-4.9
Sweden	41.3	4.6	-3.8
United Kingdom	224.1	3.7	-1.3
Source: Eurostat News Release No.126/2006, 21 September 2006.			

For a period of almost 15 years, -excluding the last two years- energy intensity rates for the EU decreased. The lower -thus better- intensity rates are mainly caused by higher growth rate of EU GDP than the growth of final energy consumption rate due to one main factor: Structural changes of the economy. Most of the economies of EU members experienced a shift from industry to services. Moreover, the improvements in the technical efficiency and production processes with the introduction of less-energy consuming industries paved the way to decreases in energy intensity rates. On the other hand, the counter move that increases energy intensity in last two years is mainly due to the enlargement process experienced both in 2004 and 2007. Among the new member states

the energy intensity rate is still around 1.3 times higher than the EU-15. This is also because of the structural differences within the economies of member states.[158]

2.2.2. Energy Supply of the EU

Generally speaking, two kinds of energy resources are available for every country to satisfy its energy needs: Domestic resources and foreign resources. Some countries have higher potentials in terms of energy resources so that they are not in need of external sources. Those countries generally have a negative dependency rate indicating that they may export more resources than they import. Almost all European states, on the other hand, has positive dependency rates which means that they need to import some part of their energy supply from external resources. Only Norway, Denmark, and to a certain extend the Netherlands are exceptions with their ability to export energy resources to the neighbouring countries.

In that sense, energy supply of the EU members will be examined in two steps: First one will cover the capabilities of the EU member states to produce their own energy resources. This part will not only mention the hydro-carbon resources but also nuclear and renewable resources as well. The other type of resources will be taken into consideration because they help a state to act independently at a certain degree and in turn, may affect its foreign policy. Second step will evaluate the energy resources that the EU member states import from foreign countries. These external resources are mostly composed of oil and gas reserves of neighboring regions. This second part will be the main point that links this chapter to the general argument of the thesis.

As it was mentioned above, the actual annual energy requirement of the EU is around 1700 million toe. To balance this demand level, EU imports around 1430 million toe and produces around 780 million toe of energy resources. In aggregate, the imports and local production exceeds the required EU energy needs. Interestingly, this excessive amount constitutes EU members' energy exports. EU exports around 460 million toe of its energy resources. This is important because it shows that some member states prefer to export outside the Union rather than developing the intra-community trade. In addition, the type

[158] For a deeper analysis of energy intensity of the EU member states, see: European Energy Agency, EN21 Final Energy Energy Consumption Intensity.

of product has an impact on trade of energy resources. Most of the EU exports are processed petroleum products, whereas the leading imported energy resource for EU is crude oil and feedstocks. Member states imports resources and re-export to some other countries. Table 2.2 shows a comparative list of production, export and import levels of energy resources of the EU.

Table 2.2 Energy Supply Sources of the EU for 2005

	Primary Production	***Total Imports***	***Total Exports***
Coal	183,890	155,639	26,291
Oil and Petroleum Products	126,807	931,213	347,786
Natural Gas	190,011	313,794	58,978
Nuclear	246,361	-	-
Hyrdroelectricty	29,132	27,448	26,609
Total	776,201	1,428,094	459,664

Source: Eurostat News Release No.126/2006, 21 September 2006.

2.2.2.1. Energy Production in the EU

As similar in any other entity, oil and petroleum products constitute the primary source of energy within the EU. Among others, oil stands out with its excessive import and export figures. As far as production within the EU is considered, however, another source of energy arouses interest. Nuclear energy constitutes almost one-third of the total energy production within the EU. More than half of the EU members have nuclear plants. These are: Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Lithuania, Netherlands, Rumania, Slovakia, Slovenia, Spain, Sweden and United Kingdom. Nuclear energy is an important source since 32 percent of the electricity of the EU, and 15 percent of the whole energy need is produced by nuclear resources.[159] France leads in nuclear energy production within the EU. EDF, the main electricity production and distribution company in France, operates 58 reactors which generates almost 88 percent of the electricity in France.[160] There are some member states like France who prefers nuclear power to generate energy. Finland is the second after France. However some member states do not prefer to use nuclear power. Italy, Austria and Ireland are the most prominent

[159] Annual Report, 2007, *Euratom Supply Agency*, Luxembourg: Publications Office of the European Union, p.4.
[160] For more information, see EDF website: http://www.edf.com/12025i/Home-fr/EDF-Energies/Nuclear-power.html.

examples. Another group of member states, like Germany and Sweden, use nuclear power but officially committed to a gradual phase out of nuclear energy. Finally, in some member states nuclear power reappearing on political agenda. In the Netherlands and the UK, new nuclear power generators and counter debates are continuously debated among political circles.[161] It would also be possible to list Turkey within this group because of the nuclear plant investment plans declared by the Turkish government in recent years.

Along with the nuclear power, EU produces energy by using its own resources of natural gas and coal mines. Each coal and natural gas reserves have a share of approximately one-quarter of the total EU production. Approximately more than one-third of the required natural gas is produced within the EU. Some EU member states have considerable natural gas reserves, despite not being comparable to the gigantic reserves of the Russian Federation, Middle East, Central Asian States or Iran. These member states and their reserves of natural gas are as follows: the Netherlands has 1341 million toe, United Kingdom has 531 million toe, Romania has 270 million toe, Germany has 180 million toe, Italy has 153 million toe, Poland has 108 million toe, and Denmark has 81 million toe of natural gas reserves. With these figures, United Kingdom produces 86 million toe/year, Netherlands produces 62 million toe/year and Romania produces 11 million toe/year.[162] Remembering the fact that the total annual natural gas requirement of the EU member states is around 430 million toe and their respective production is around 200 million toe, it can be easily argued that the EU is urgently in need of new natural gas sources to securitize its energy supply. One of the best alternatives to provide this securitization process is to resort the resources of the Russian Federation and former Soviet Republics of Central Asia. In that sense, Russian Federation has an annual production rate of 530 million toe, Turkmenistan has 50 million toe, Uzbekistan has 50 million toe, Kazakhstan has 20 million toe and Azerbaijan has 5 million toe. Moreover, with a annual production capacity of 250 million toe, the Middle East; and with the capacity of 130 million toe, Africa are other alternative sources of natural gas for the EU.

[161] Van der Zwaan, Bob, 2008, "Prospects for Nuclear Energy in Europe", *International Journal of Global Energy Issues*, Vol.30, No:1, pp. 102-121.
[162] For the consumption and production figures of natural gas, see: BP Statistical Review of World Energy June 2005, p. 22-26.

Coal has the third place as far as the production within the EU is considered. There is an average of 320 million toe demand for coal in EU member states. However, the production of the EU countries is around 200 million toe per year. The gap between the necessary amount and production is imported and will be the subject of the next sub-section of this chapter. Yet, it should be noted here that Poland leads in coal production with an annual production amount of 70 million toe. Poland is followed by Germany (55 million toe) and Czech Republic (23.5 million toe). The other bigger members of the EU, on the other hand, have not has a considerable share in coal production.[163] Even more, Italy and France have almost no production at all. This fact may also help us to comprehend why France has invested so much on nuclear energy production facilities.

As it was mentioned above, oil is the most commonly used source of energy in Europe. The demand for oil within the EU is more than 700 million tons annually. As the most popular source of energy both in Europe and at worldwide, oil has a contrary situation as far as its production within the EU countries is considered. Only three of the EU countries have a considerable oil production sector. United Kingdom, Denmark and Italy produce 95, 20 and 5.5 million tons of oil, respectively. The proven reserves of the member states that worth to mention are as follows: United Kingdom has 600 million tons, Denmark has 200 million tons, Italy and Romania has 100 million tons of proved oil reserves. Despite being a non-EU member, with its 150 million tons of annual production and 1300 million tons of proved oil reserves, Norway has significant oil reserves in Europe. In that sense, Norway has sometimes been considered within the EU in some energy related studies. However, in this case, this study sets Norwegian resources apart from the EU sources.[164] Besides Norway, the most important sources of oil for the EU member states are: Russian Federation and Former Soviet Union States in Eurasia, Middle East, North America, Mexico and the South and Central America, North and West Africa. The imported oil will be examined in the next sub-section of this chapter in detail.

[163] For the consumption and production figures of coal, see: BP Statistical Review of World Energy June 2005, pp. 30-35.
[164] BP Statistical Review of World Energy June 2005, pp. 4-19.

2.2.2.2. Energy Imports of the EU

Imports have a great importance for the satisfaction of EU's energy supply requirement. Since the EU has not sufficient hydro-carbon energy resources, imports of oil, natural gas and coal comprises almost the entire European energy imports. Because, the EU member states are about to meet the necessary requirement, EU's other imports of energy resources are beneath notice. In this sense, contrary to the inland production, oil and its derivatives have the first place as far as imported energy sources of the EU member states are considered. Europe has the second place after the US in oil imports with 12.5 and 12.8 million barrels/day, which corresponds approximately 620 and 635 million million tons per year, respectively. This means that Europe is the one of the two biggest oil consuming markets at the global level. This also means that securing the energy supply is vitally important for European countries since they do not have self-sufficient resources.

Table 2.3. Crude Oil Imports of the Europe (including non-EU Member States)

From	***Million tons***
USA	12.0
Canada	0.7
Mexico	9.1
South and Central America	11.7
Former Soviet Union	264.9
Middle East	159.6
North Africa	95.5
West Africa	27.0
East and Southern Africa	1.3
Asia Pacific	4.3
Unidentified (For unknown military or other purposes)	35.3
Total Imports	621.4

Source: BP Statistical Review of World Energy, June 2005, p. 18.

Table 2.3 depicts regional import figures for the whole Europe, which includes the non-EU states. As the table shows, Former Soviet Union is the main oil supplier for the Europe with a share of more than one-third of the total imports. Middle East is the second largest oil exporter for the Europe with a share of slightly higher than a quarter of total imports. These regions are followed by North and West African countries. Bearing in mind those import figures -particularly from neighboring countries- and that the European countries

require huge amount of energy resources, it can be argued that the EU should assume a more assertive role in world politics as a global actor in order to secure energy independence.[165]

The above Table 2.3 shows, however, the whole European countries. When the EU is taken into consideration, the total imports decrease to 595 million tons of crude oil for 2005. Therefore, despite being not totally a competitor for the US at the moment, the European Union is a considerable importer of crude oil and its derivatives for all other petroleum consuming entities. Table 2.4 depicts 2005 import figures of the EU for crude oil and petroleum products, of which crude oil constitutes almost 80 percent of total imports to the EU member states.

Table 2.4. Oil Imports of the European Union (tons)

Countries		***Crude Oil***	***Petroleum Products***
Egypt		1,845,000	-
Gabon		512,000	-
Mexico		10,616,000	-
Norway		91,470,000	7,732,000
Romania		-	1,725,000
Russian Federation		194,747,000	32,969,000
USA		-	12,136,000
OPEC Members	Algeria	22,576,000	4,817,000
	Iran	34,738,000	-
	Iraq	12,291,000	-
	Kuwait	7,620,000	1,998,000
	Libya	52,208,000	5,234,000
	Nigeria	19,574,000	-
	Saudi Arabia	60,896,000	4,195,000
	United Arab Emirates	201,000	-
	Venezuela	6,877,000	4,818,000
Total		595,468,000	121,404,000

Source: Eurostat News Release No.126/2006, 21 September 2006.

Table 2.4 shows that almost one-sixth of the necessary oil requirement –disregarding the intra-community trade– is supplied by Norway. Together with Norway, the Russian Federation is the greatest supplier of the EU. The share of Russia is more than 31 percent

[165] Whether EU has become more assertive in global political arena or not is a distinct question that goes beyond the scope of this study. For more detailed analysis of EU's global role, see. Charlotte Bretherton and John Vogler, *European Union as a Global Actor*, London: Routledge, 2006.

of the total imports. Considering this figure when complemented particularly with the natural gas imports from Russia, it can be argued that having consistent relations with this country has become an exigency for the EU.[166] On the other hand, OPEC countries have the greatest share in EU oil imports as a group. Among those countries, Saudi Arabia and Libya are the main suppliers. Iran and Algeria have also considerable share in EU's oil supply chain. In that sense, the question of reliability of those sources in the long-run is vitally important for Europe. Various possible risks and threats that those countries may pose on European energy supply security will be discussed in the final chapter of this study, however, it should be noted here that most of the oil suppliers of the EU are not so much reliable because of several reasons. Therefore, the EU significantly needs supply diversification as it was mentioned in various papers prepared by Community agencies and the European Commission.

Natural gas has been one of the most demanded sources of energy in the recent decades. The increasing demand of EU member states for natural gas depicts a similar pattern with the current worldwide demand for this resource as well. In that respect, however, the EU countries do not have sufficient resources to meet the necessary 450 million toe amount of natural gas. Therefore, similar to the oil, EU countries imports most of their natural gas demand mainly from neighboring countries and also from other parts of the world.

First of all, there is a considerable amount of intra-community trade of natural gas among member states. For instance, Germany, France, Italy and Belgium imports 19.2, 8.5, 7.8 and 6.9 million toe of natural gas from the Netherlands, respectively. Germany also exports more than 10 million toe of natural gas to the neighboring EU member states. Besides the intra-EU trade, Norwegian natural gas supplies also constitute an important continental source of energy. Norway exports 84 billion cubic meters of natural gas to the Europe which corresponds around 75.6 million toe. As usual for the demand of other energy resource, Germany, France and the UK are the main demanding member states followed by Italy, Netherlands and Belgium. Again similar to oil, Russian Federation is the main supplier of Europe. The Russian exports to the EU countries almost totaled to 130 billion cubic meters of natural gas, which is equal to 115 million toe. Germany has a share

[166] The EU and all other countries buying energy resources from Russia have become irritated as a result of the natural gas dispute between Russia and Ukraine in 2006.

of 27 percent of natural gas transferred from Russia to Europe, which is around 33 toe of natural gas. Italy has the second place after Germany with an import level of 20.6 toe. These two members, in that sense, are heavily reliant on Russian natural gas. French natural gas import figures from Russia, however, depict a more moderate tendency due to its huge nuclear energy production. With the natural gas import level of more than 6 million toe, Austria is also an important importer of Russian gas. Interestingly, the UK do not have any natural gas deal with Russia. Almost the rest of imported gas from Russian Federation belongs to new member of the EU. Particularly due to the former Soviet ties, these ex-communist countries of Central and Eastern Europe have a considerable share of Russian natural gas resources. Among them, Hungary (7.5 million toe), Czech Republic (6.4 million toe), Poland (6.3 million toe) and Slovakia (5.7 million toe) are the premier importers of the Russian gas. It is also worth to mention here that Turkey would be the third greatest gas importer of Russian gas among the EU members, if the country was accepted to the membership with the import level of 17.7 million toe. Moreover, Turkey may receive more natural gas from neighboring resources, particularly from Russia, so long as its position as a transit country is relevant. [167]

Some of the EU members have also purchased natural gas outside the Eurasian region. As a result of the advantages of proximity and efficiency, Italy, Spain, Portugal and Slovenia imports North African natural gas from their Mediterranean neighbors. Italy is the main importer of the North African gas. This country imports 22 million toe from Algeria and 7 million toe from Libya. Algeria also exports more than 10 million toe of natural gas in aggregate primarily to Spain, Portugal and Slovenia, of which Spain has the primary share of almost 80 percent.

There are some potential regions or countries for becoming a supplier of natural gas to the Europe in order to decrease the natural gas dependency of the EU on particular suppliers. In that respect, the Former Soviet Republics of Central Asia and the Caspian, Iran, Gulf Countries or Egypt seems to be among the most probable suppliers of EU. Moreover, the position of Turkey as a hub between these new sources and the EU may be

[167] For more information about the major worldwide trade movements of natural gas and LNG, see: BP Statistical Review of World Energy, June 2007, pp. 30-31.

an important aspect to evaluate. Turkey's role and related arguments will elaborately be taken into consideration in later chapters.

The EU members also import considerable amount of Liquefied Natural Gas (LNG). African suppliers have taken the lead in providing LNG to the Europe. Algeria exports 21.1 million toe of LNG to the European countries, of which 4.1 million toe is belong to EU candidate Turkey. France is the main buyer for the Algerian gas with 6.6 million toe. After Algeria, Nigeria has the second place in exporting LNG to the EU. This country sells 6.4 million toe of LNG to Spain and 3.8 to France. Portugal and Belgium also purchases LNG from Nigeria. Turkey also imports a limited quantity of Nigerian gas. Finally, Egypt is the third African supplier of LNG to the Europe. The chief clients for the Egyptian LNG are again Spain and France. Egypt exports 7.6 million toe of LNG to European countries in aggregate. Libya has a trivial share of LNG exports with no more than 700 thousand toe to Spain. Besides African countries, two Gulf countries are also listed among the LNG suppliers: Qatar and Oman exports 5.7 million toe of LNG to Spain and Belgium, of which 95 percent goes to Spain. Finally, Trinidad and Tobago sells 3.4 million toe of LNG to Spain, UK and Belgium. In this case, Spain is again the main receiver of the LNG.[168]

As another important hydro-carbon resource, the European countries imports coal from non-European suppliers. Although the EU countries have considerable coal resources, the member states imports significant amount of which is also worth to mention. Around 160 million toe of necessary hard coal is imported from outside the EU. This corresponds 64 percent of the total hard coal consumption. Among the non-EU imports, South Africa and Russia stand out as the main suppliers with respective shares of 25.4 percent and 24.2 percent of total hard coal imports. Australia, Colombia and the US are also among the significant suppliers of hard coal for the EU.

Among the EU members, UK leads with 33.1 million toe of coal imports. Different from oil and gas imports, Germany has the second place with 27.5 million of imports. Italy, Spain, Netherlands and France follows these two big coal importers with respective import levels of 16.4, 15.8, 13.3 and 13 million toe. It should also be mentioned about the hard coal that the total imports of this resource increased by 6.8 percent in the period of

[168] *Ibid*., p. 30.

2005-2006 parallel to the 4.3 percent increase of hard coal consumption within the Union.[169] Lignite – generally known as brown coal – on the other hand is imported in a very trivial amount at the EU level. With the 2004 figures, the import of lignite was 719 thousand toe, which is slightly less than 0.05 percent of the total hard coal imports.[170] From this perspective, the Union members are not vitally dependent on important coal resources not only because they have indigenous coal resources, but also because the share of coal in energy demand is less than oil, natural gas and LNG.

2.3. Energy Policies and Initiatives of the European Union

2.3.1. General

As it is obviously seen in demand and supply figures given above, the EU members have strategically been in an unfavorable position as far as the uneven geological distribution of energy resources are considered. Not only for sustaining its high level economic performance, but also for being an active global player, the EU needs to guarantee supply of energy resources and have to control the stability in certain regions. Otherwise, without obtaining necessary energy, it is almost impossible to be a competitor for existing or emerging powers, i.e. the US and Japan, India and China or Russia.

Generally for this purpose, and particularly after certain events such as the September 11, the NATO operations in Afghanistan and US invasion in Iraq, increasing interest on energy issues within the EU decision making circles have obviously become clear. This revival of energy matters generated its most concrete results with a series of documents. These documents include three important green papers prepared by the Commission and other related documents which are published by Community institutions or other organizations as a result of the debates launched by those green papers.

First of all, the European Commission issued a Green Paper in late 2000. The Green Paper was labeled as 'Towards a European strategy for the security of energy supply'. Being less comprehensive than the 2006 Green Paper, this one also mentioned the problem

[169] Patricia Noizette-Giorgetti, Eurostat Data Infocus, Coal 2005-2006, September 2007, pp. 1-5.
[170] Bosch, J. et al. Panorama of Energy: Energy statistics to support EU policies and solutions, Eurostat Statistical Books, European Commission, 2007, p. 9.

of import dependence in energy resources and sets two main challenges: (1) effects of climate change which raises environmental concerns, and (2) effects of the developing internal energy market on energy demand which may rise political tension. In the Green Paper towards a European strategy for the security of energy supply, the Commission complains about lack of political consensus among the member states and also the limited Community powers in energy policy except for certain areas such as internal market, harmonization, environment and taxation. Therefore, Commission outlined a long term European Energy Strategy. In this initiative, the Commission suggested that the Union should speed up "to ensuring -for the well-being of its citizens and the proper functioning of the economy- the uninterrupted physical availability of energy products on the market, at a price which is affordable for all consumers (private and industrial), while respecting environmental concerns and looking towards sustainable development."[171] European Commission also added that security of supply means diversifying various sources of supply and ensuring a balance among those sources rather than maximizing energy self-sufficiency and minimizing dependence. This initiative shows that the Commission is overtly aware of insufficient sources of member states as well as the inability of alternative sources for hydro-carbons to meet the demand in Europe.

This realistic but modest approach of the Commission basically offers diversification and a balance in energy imports as the best solution for securing energy supply of Europe. With regards to balance in energy imports, Commission asked member states for a 'rebalancing' in supply policy by a clear action in favor of a more moderate demand policy. In that sense, Commission envisaged consumers should be encouraged to have a more realistic and moderate demand by using certain tools, such as taxation measures or using other fiscal instruments.[172] As for the diversification, the Commission recommended providing a strong mechanism to develop strategic stocks as well as searching for new import routes. New routes for oil –as the most important source of energy– were particularly mentioned in this Green Paper. For this purpose, alternative oil pipeline routes from Caspian Sea basin and the southern Mediterranean were emphasized in order to

[171] European Commission, Green Paper: Towards a European strategy for the security of energy supply, 2000, p.2.
[172] *Ibid*., pp.69-71.

diversify the supply of oil.[173] However, the Commission retained from making exact definitions of the routes.

Debates on November 2000 Green Paper revealed an absolute consensus among the main stakeholders, such as Member States and NGOs. This agreement paved the way to a series of Commission proposals on certain activity areas. These are: electricity production from renewable resources, energy saving in buildings, promotion of bio-fuels and a White Paper on transportation policy, which represents almost one-third of the total energy consumption.[174] Despite raising reservation among some of the Member States, the Council welcomed this initiative and supported a new energy strategy for a further integrated energy market[175] which is consistent with objectives of sustainable development and climate change concerns. In that sense, Council asked Commission to provide new proposals about issues of renewable energy and energy efficiency.[176] The Council also mentioned that the debate should focus on controlling demand growth and supply dependence both within the Community level and among supplier countries. Furthermore, the Heads of States and Governments called for the adoption of energy taxation directive in the Barcelona European Council at the end of 2002. To sum up, November 2000 Green Paper opened up a debate which in turn causes the Commission to issue two other green papers concerning the field of energy: First one is related to the control of energy demand. Second one, on the other hand, is more comprehensive yet concentrated on securing energy supply.

As the EU perceives to decrease energy demand as an important way of its supply policy, European Commission worked on a paper suggests controlling energy demand. As a consequence, Green paper on energy efficiency was issued by the Directorate-General (DG) for Energy and Transport in 2005. Based on the idea that the EU could save at least 20 percent of its existing energy consumption with a more moderate energy demand trend, this green paper also referred to the Lisbon agenda, which is currently one of the most

[173] *Ibid*., pp. 71-71.
[174] For the full texts of Directive 2001/77/EC, 2002/91/EC, 2003/30/EC and the Transportation Policy White Paper, see: Security of Energy Supply, Retrieved on: 15 July 2007 from: http://europa.eu/scadplus/leg/en/lvb/l27037.htm.
[175] European Council, 2347th Council meeting – Energy and Industry, Brussels: 14-15 May 2001, pp.10-13.
[176] *Ibid*., pp. 14-18.

important issues of the EU. In this sense, the green paper asserted that saving around 60 billion Euro annually by implementing an effective energy policy could contribute to achieve more competitiveness and employment at the EU level, which represents the main purposes of Lisbon agenda.[177]

The Green Paper on Energy Efficiency initially identified the obstacles against an EU wide energy efficiency policy and then proposed a 'European Initiative.' This initiative envisages actions both at community level and national level. As mentioned in the earlier green paper on energy, the vitality of taxation and other financial instruments were mentioned as well as specific energy measures, such as limiting consumption in buildings and vehicles. Because they are the most energy consuming sectors, industry and transportation is also separately mentioned in the Green Paper on Energy Efficiency in specific chapters. In line with this document, a series of directives were designed by the Commission in order to increase energy saving or forming national action plans. In late 2006, Commission issued a communication known as the 'Action Plan for Energy Efficiency: Realizing the Potential'. The purpose of this document is to "outline a framework of policies and measures with a view to intensify the process of realizing the over 20 percent estimated savings potential in EU annual primary energy consumption by 2020".[178] Rather than concentrating on a specific action, this plan envisages an integrated approach which covers policy and fiscal incentives, more use of technological innovations, more favorable financing conditions and positive shift in consumer behavior. Furthermore, in its meeting on 9 March 2007, European Council backed Commission proposals and agreed on an action plan to put in place a European Energy Policy by 2009. Some important and binding targets were set concerning the issues of renewable energies, greenhouse-gas reduction as well as energy efficiency and saving.[179]

Soon after the Green Paper on Energy Efficiency, another document published by the Commission has dominated the EU agenda much more than any other previous Commission initiative. DG Energy and Transport issued a Green Paper towards a

[177] European Commission, Green Paper on energy efficiency: Doing More with Less, 2005, pp. 4-5.
[178] Action Plan for Energy Efficiency: Realising the Potential, 2006, COM(2006)545 final, Brussels: European Commission., p. 4.
[179] Presidency Conclusions, 7224/1/07 REV1, Brussels: Council of the European Union, 2 May 2007, pp. 10-14.

European strategy for the security of energy supply.[180] This green paper is published on 8 March 2006 and is still the most significant document published by the Commission which provides an outlook for the scope of a potential common energy policy of the Union.

2.3.2. Green Paper towards a European Strategy for the Security of Energy Supply

As it was mentioned earlier, one of the most important deficiencies of the EU is the lack of a common energy policy. Being aware of this fact, the Commission prepared an introduction which highlights the significance of having a common policy with respect to energy matters. Some of the main findings of the Commission include: (1) the huge investment requirement on energy infrastructure, (2) rising import dependency at Union level, (3) relying on few supplier countries, (4) uncontrolled demand increase at global level, which in turn causes oil and gas prices to rise, (5) the threats of greenhouse gas emissions and global warming posed on ecosystems, and finally (6) EU's inability to achieve fully competitive internal energy markets.

After making certain keynote points, Green Paper summarizes the energy needs of EU and its citizens on 'three basic pillars': Sustainability, competitiveness and security. To achieve this end, the Commission perceives any 'approach based solely on 25 individual energy policies' as insufficient. According to the Commission, moreover, the EU –as the world's second largest energy market– has the tools to protect and assert its interests in order to have sustainable, competitive and secure energy. In Commission's perspective, this could be achieved by a new common policy on energy questions. Therefore, the first part of the Green Paper makes an introduction about the current energy debates and identified 6 key areas where action is necessary at Community level. By asking several questions in these key areas, the Commission also questioned whether "there is an agreement on the need to develop a new, common European strategy for energy, and whether sustainability, competitiveness and security should be core principles to underpin the strategy".[181] In this regard, the Commission outlined the 6 key areas to take action as: (1) competitiveness and internal energy market, (2) diversification of the energy mix, (3) solidarity among member states in energy issues, (4) searching for and achieving

[180] Green Paper: A European Strategy for Sustainable, 2006, Competitive and Secure Energy, COM(2006)105 final, Brussels: European Commission.
[181] *Ibid*, pp. 3-4.

sustainable development, (5) leading in innovation and technologies, and finally (6) forming an external policy to speak with a common voice. Before explaining these key areas in detail in the part two of the Green Paper, the Commission stressed the importance of a clear and flexible framework, which means that this policy should be approved and implemented at the highest level as well as open to periodic updating depending on current tendencies in the energy agenda.

2.3.2.1. Competitiveness

The second part of the Green Paper analyzes those six priority areas in detail where action by the Union is almost necessary. The first sub-section of the second part highlighted the requirement for a competition among players rather than dominant national companies in order to achieve considerable prices as well as security of supply. Thus, the Commission perceived protectionism as a threat to energy policy and asked for more improvement at Community level despite the recent activities made for creating a competitive market were appreciated in the Green Paper[182]. In that sense, Commission suggested improvement in five core areas.

The first area that the Commission drew attention is to develop gas and electricity market by forming a single European grid. Common rules and standards are necessary which will help to provide fair and equivalent grid access conditions. Commission recommended forming a European grid code particularly by the collaboration of national network operators. Moreover, Commission also suggested a European energy regulator who would be responsible for cross-border operations.

The second core area requires particular attention is to form an interconnection plan for developing the existing energy network among member states. Reminding the 2002 Barcelona European Council target of minimum 10 percent interconnection level, the Commission demands to develop more interconnection capacity. Progress in energy network is not only important for some countries to access to or provide energy from other member states like in the case of Malta, Ireland or Baltic States, but also to permit a healthy competition like in the case of France and Spain. A better interconnection would

[182] *Ibid*, pp. 5-6.

also help to decrease the need for storing expensive spare capacity. In that sense, Commission recommended to utilize individual measures at member state level, and Trans European Network instruments at Community level. Finally, the Green Paper mentioned the transit role of Switzerland for electricity transfer. [183] In that respect, Commission did not mention Turkey and its transit role. However, it should not be accepted as a failure, since intra-community energy transit routes were the main argument of this second area. Switzerland is the only mentioned non-member country because it is located among various member states and it has a critical role in enlargement of electricity grid of the Union.

Commission mentioned the necessity for investment in generation capacity as the third area that requires particular attention. A 20 years period of substantial investment is envisaged by the Commission to replace the aging electricity generation capacity.

The fourth area is related to a 'level playing field' for a fair and free competition. The positions of national markets at the member states depict differing degrees of competitiveness. The Commission stressed applying further measures in case of a failure in the implementation of the second electricity and gas directive which aims to achieve a standard in all member states.

Finally, the Commission perceived the target of full competitiveness at European industry as one of the five core areas to improve the internal European electricity and gas market. For this purpose, a secure energy at affordable prices in an integrated and competitive market is vitally important. To sum up, competitive and integrated European gas and electricity markets which in turn help to improve growth and jobs at European level is nominated as the first of the six priority areas that the Commission takes attention.

The second priority area that the Commission put forward in the Green Paper is a necessity for the solidarity among member states as far as energy security is considered. A liberal and competitive market that brings predictability and transparency may help a positive incursion of investment to the energy sector, which may in turn increase the security of supply. In that sense, the European Commission offers (1) the formation of a

[183] *Ibid*, pp. 6-7.

European Energy Supply Observatory to monitor the demand and supply at European level, (2) the formation of European security and reliability standards to allow a more perfect flow of information among operators, which may improve network security, and finally (3) the formation of a solidarity mechanism both for protecting infrastructure by common measures and for providing assistance to a member state who faces difficulty or an attack. The Commission recommended revising the EU approach to emergency stocks of oil and gas as well. Since any disruption in the hydro-carbon sources could fail all the system of the EU, the Union must be able to reach even for the short term emergency situations. Moreover, the Commission stressed the global aspect of this issue which requires compatibility with global supply mechanisms. This means a coordinated Community response to the IEA decisions should be properly developed at Community level.[184]

2.3.2.2. Sustainability

A third strategic priority area mentioned by the Commission is to standardize the use of optimum energy mix to tackle competitiveness and security of energy supply. Since the energy mix preferences of a member state may have considerable impacts on the energy security of another member state or the Union as a whole, Commission suggests a clear European framework on the energy mix by using a Strategic EU Energy Review, which would analyze the advantages and disadvantages of different sources of energy. Furthermore, the Commission raised the importance of an agreement among member states on an overall strategic objective for a balanced energy mix both at the Union and member state levels.

The fourth priority area has a larger part within the Green Paper because it evaluates the seriously developing subject of climate change. According to the Commission, despite being an issue of international action, EU has a pioneering position at the fight against climate change and shows a long-term commitment.[185] Green Paper argues that, by concentrating on renewable resources and energy efficiency measures, EU will not only have a leader role in technological innovations but also will be released partly from import

[184] *Ibid*, pp. 8-9.
[185] *Ibid*, p.10.

dependency. The Commission examined this issue under three action areas: (1) Using energy more efficiently, (2) using more of renewable energy sources and (3) using carbon capture and storage techniques more frequently. As for the first one, Green Paper argues an amount of 20 percent of energy used could be saved with reference to the Green Paper on energy efficiency dated 2005. The economic equivalent of this saving is estimated as 60 billion Euros which in turn might be invested in energy saving technologies. In this respect, two kinds of action emerge in the forefront: Engaging in energy saving activities like energy efficiency campaigns in buildings or transportation, and developing energy saving technologies. As for the former, market based instruments and tax policies may be an effective tool, and for the latter, sources from the EU's cohesion policy and investments by commercial banks in energy efficiency projects may be among the potential instruments.[186]

As stated above, the first action area mentioned in the Green Paper is energy efficiency. Another action area –according to the Green Paper– consists of renewable energy sources. After praising the European efforts on depending on renewable resources, the Commission confesses that there are still many steps to take and the Union should rearrange its targets. For this purpose, Green Paper appraised that the Commission will form a Renewable Energy Road Map which will cover key issues. This will include (1) an active program with specific measures, (2) new targets beyond the objective of 2010, (3) new Community directive on heating and cooling, (4) detailed plan for reducing energy dependency and (5) initiatives for making renewable energy sources familiar for the consumers and markets.[187]

Besides energy efficiency and making use of more renewable technologies, Green Paper thirdly suggested carbon capture and storage techniques for the fight against climate change. When compared to the previous action areas, carbon capture requires a long term planning since this area is still in considerable need of research and development activities. However, it is also noted that this technology is particularly important for the countries which uses coal as an important source of energy.[188]

[186] *Ibid*, p.11.
[187] *Ibid*, p. 12.
[188] *Ibid*, pp. 12-13.

Before the final one, the fifth priority area is relevant with previous areas. The Green Paper argued that in order to provide supply security, sustainability and competitiveness, innovative technologies should actively be developed. For this purpose, the Commission suggests initiating a strategic energy technology plan as well as supporting the role of a proposed European Institute of Technology. However, the Commission also has some concerns about the funding of new technologies. Therefore, the Commission contends that policy measures should be implemented in order to provide an open market for new technologies and conditions of market penetration for the existing technologies. Most of these policy measures, according to the Commission, may be comprised of Union level activities which will enforce the member states to implement green certificates, feed-in tariffs[189] and other similar measures for ensuring environmentally friendly energy production.[190]

2.3.2.3. Security

The first five priority areas of the Green Paper that mentioned above were related with the two pillars of the new European energy policy proposed by the Commission. Those are providing sustainability and competitiveness in energy supply system. The final priority area listed in the Green Paper, on the other hand, refers to a third pillar of that proposed European energy policy. This third pillar is known as the security of energy supply. Therefore, the sixth priority of the Green Paper is comparatively more important for the analysis of this study. Therefore, this priority area will be evaluated in more detail.

2.3.2.3.1. Fundamentals of a Common Energy Policy

With respect to providing security of energy, the Green Paper complains about the lack of a coherent energy policy at Union level, which would help EU to play a more effective and assertive international role. In order to manage the energy issues, therefore, the Green Paper suggests determining the aims of a probable Common Energy Policy with certain necessary activities. In this respect, the Commission outlined some key goals and instruments for a common voice considering the energy matters.

[189] Feed-in tariff is the general expression for the price per unit of electricity that a utility or supplier has to pay for renewable electricity from private generators, in which the government regulates the tariff rate.
[190] COM(2006)105 final, pp. 13-14.

First of all, Commission stressed the importance of a certain policy on securing and diversifying energy supplies. By this way, necessary upgrading or construction activities for energy infrastructure may clearly be identified in line with the pre-determined energy mix for the whole Union. New gas or oil pipelines as well as LNG terminals may require considerable time and money for construction. Those types of investment require a certain and long-term policy planning. Therefore, such a policy may help Union to implement regulatory measures, which in turn may foster interest among private sector.

Secondly, partnership with energy producing and transit countries as well as other international actors is vitally important for a coherent EU energy policy. There are bilateral and regional dialogues between the EU member states and suppliers, transit countries and also other major energy consuming countries. However, again according to the Commission, after achieving a single voice in energy supply policies, these relations should be set in accordance with the priorities and principles mentioned in a probable common energy policy. In this respect, relations with major energy suppliers take precedence. Relations with Russia are particularly mentioned in Green Paper and are assumed to be based on a secure and predictable manner after implementing a common external energy policy. This policy would require regulating relations with Russia or any other energy supplier according to the rules at Community level rather than national preferences of individual member states.

Furthermore, forming a pan-European Energy Community covering neighboring countries is presented in Green Paper as an important part of European energy security. According to the Commission, "Creating a common regulatory space around Europe would imply progressively developing common trade, transit and environmental rules, market harmonization and integration"[191] which would in turn provide a predictable and transparent market with secure energy sources for the EU and its periphery. In that respect, Norway, Turkey, Ukraine and Algeria are particularly mentioned in the Green Paper as the strategic partners that further convergence should be achieved considering the energy issues.

[191] *Ibid*, p. 16.

An effective reaction to external crisis situations is another goal mentioned by the Green Paper that a common European voice in Energy issues should target. Commission seeks for a fully coordinated and rapid reaction to emergency situations occurring in the international arena. Therefore a common and straight standing of the EU against energy crises at the international level is the third goal that the Green Paper requires for an effective common energy policy.

As for the fourth goal of a common voice, Green Paper brings forward the requirement for a political will at the Community level. The main target of this political will is to enhance the energy policies and priorities of the EU among the political circles of other regional and international actors. For instance, greater efforts towards widening the geographical scope of the EU Emissions Trading Scheme may be a concrete example of this goal. Moreover, this objective is not limited with near abroad of the EU. At different multilateral fora, i.e. the UN, the G8 or the IEA, the Union may have direct contact with global actors such as the US, China or Japan. Therefore, this fourth goal of a probable European energy policy has a global impact on imposing the energy criteria of the Union on other international actors.

Finally, the Green Paper suggests that an energy policy should target the development of renewable energy sources and other micro-generation projects of many underdeveloped countries. Considering the fact that only 7 percent of Africa's hydro power potential can be used, could it be fair to argue that there is a tough struggle against global warming and climate change? It is not. Therefore, the importance of this target for is overt.

To sum up, the Green Paper, which can be regarded as the Commission's guideline for a common European energy policy puts forward these five key objectives for a proper functioning of any external energy policy at the EU level. On the other hand, setting objectives and defining certain ways is not self sufficient for having a prompt energy policy. The next step is the phase of implementation and implementing a common energy policy requires some instruments.

2.3.2.3.2. Instruments of a Common Energy Policy

One of the most important weaknesses of the Union is that the EU shows deficiency in decision making among member states. Foreign policy is one of the most prominent examples of this deficiency. This situation paves the way to a lack of decisive policy and utilizing effective instruments in those fields. Regarding as a part of the foreign policy, energy security issues are suffered from a lack of decisive policy and effective instruments. Despite it is not fair to talk about an absolute lack of instruments for a European energy policy; it is hard to argue that there are effective means at the hands of Union for implementing a proper policy. Since there is no concrete common European energy policy, the instruments for implementing policies are very limited. Therefore, one of the main reasons for this problem can be attributed to non-existence of Community competences in the area of foreign and security policy as well as energy policies. The Community cannot have sufficient enforcement ability over the decisions of member states. Therefore, the individual interests and policies of the member states decrease the chance of a decisive common energy policy as well as implementation of effective instruments.

Whatever the constraints on imposing foreign policy decisions on member states, EU has a limited number of instruments particularly on energy matters. EU has both carrots and sticks for achieving its energy policy goals mentioned in the Green Paper. More effectively and constantly use of fiscal measures can be used as a tool of inspiring energy saving policies among the people of the member states. Market based instruments, which covers the Community energy tax framework, can be efficiently used for making cost effective investments in order to reduce the energy consumption. With reference to the 2005 Green Paper on Energy Efficiency, low energy consuming technologies may be encouraged by lower levels of tax and products demanding high energy may effectively be discouraged by higher taxation levels for those products.[192] Besides taxes, the EU Emissions Trading Scheme, reducing VAT for energy efficient products and state aids may also be listed as market based instruments. Moreover, framework programs and competitiveness as well as Innovation Programme are also among the most important EU

[192] Doing More with Less, Green Paper on Energy Efficiency, 2005, COM(2005)265 final, Brussels: European Commission, pp.12-13.

funding instruments for encouraging energy efficiency.[193] In summary, the EU funding instruments and market-based instruments are the most prominent tools that the Union can use for its own energy policy initiatives and are in conformity with the EU's soft power approach.

On the other hand, similar to other foreign policy instruments of the Union, some advantageous privileges may be used as energy policy instruments. As far as the energy suppliers and transit countries are considered, it is necessary to integrate them to the European energy network. New treaties with those external energy partners and effective use of Community investment for external strategic energy infrastructure are the most important instruments that the EU can utilize in its energy policies.[194] These instruments, in other words, are a complementary element and are in line with the main aims of European Neighborhood Policy (ENP). The EU provides technical and financial assistance to the neighboring countries as a part of ENP. The common target of the Union and neighbors, in this respect, is to provide a zone of stability, security and well-being. Therefore, energy issues can be a direct beneficiary of ENP. The ENP has also mentioned 'integration of transport and energy networks' as one of the common areas that the EU and ENP partner agreed to improve. In this sense, the positive instruments of energy policy are similar to the foreign policy tools of the Union which falls under the auspices of the first pillar: the EC pillar.

However, different from the foreign policy tools, there is almost no or very little room for the instruments under the second pillar, which is CFSP. The European Union has the chance to act as a body by using declarations and statements, high level visits, diplomatic sanctions, political dialogue, special envoys, peace conferences, arms embargoes and other diplomatic instruments as far as foreign policy issues are considered.[195] However, those instruments can be relevant for energy policy issues as long as those issues cause a security problem for the Union.

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[193]Funding Energy Efficiency in the EU, 2007, *EurActive*, retrieved 10 July 2008, from: http://www.euractiv.com/en/energy/funding-energy-efficiency-eu/article-165378.
[194] COM(2006)105, p.16.
[195] Smith, Karen, 2003, *European Union Foreign Policy in a Changing World*, Oxford: Polity Press, pp. 60-64.

To sum up, the Union has both have some positive and some negative reinforcing policy instruments regarding the energy policy issues. With respect to internal instruments, EU funding mechanisms and market based solutions are the most effective tools. As for the external instruments, the Union has lower level of capabilities since the member states retain the decision making power in their hands. Each member state prefers to use its own instrument in line with its own energy policy, mostly regardless of the priorities and exigencies of other members.

In this respect, the energy policies of smaller member states are naturally incapable of making a severe impact on Union's priorities. However, the preferences and policies of bigger member states have a direct impact on EU energy policy. Therefore, the next sub-section will try to examine the energy policies of some member states that may easily affect the course of EU energy policy making.

In accordance with –the theory shaping the main framework of this study– realism, the energy policies of greater powers are more critical for understanding the developments in energy politics. In that respect the energy policies of four bigger member states will be briefly evaluated in the forthcoming subsection. These are Germany, France, Italy and the UK. Among them, the energy policies of Germany will be most critical one not only because of Germany's current leadership role in the Union but also because of the intensive Russo-German relations in the field of energy. From that point of view, Italy's energy policies are also important because Italy has also developed its energy relations with the Russian Federation in recent years. Italy has also planned to buy natural gas via Greece and Turkey which seems a highly probable project after the opening of Turkish-Greek pipeline in late 2007. As the bigger members who have significant influence on the decisions of the Union and on international politics, the energy policies and perspectives of France and the UK are also worth to mention.

2.4. Energy Policies of Member States

Some of the key information about the energy patterns of the EU members has already given above. However, this part will not only give more detailed data about the energy patterns of four leading members, namely Germany, France, UK and Italy but also will

concentrate on their relations with exporting countries, their policies for providing diversification of energy type or routes and other significant informative characteristics of those member states. Among them, Germany is the most important because of its key leading role at Union level, its huge energy consumption rates and developing German-Russian energy dialogue.

2.4.1. Energy Policies of Germany

As one of the most prominent industrial economies in the world and the leading member state of the EU, Germany's energy trend depicts a very high amount of energy consumption rate at an accelerating pace. In order to meet this growing demand, Germany necessitates external energy resources. However, depending extremely on external resources is politically very risky since most of the economy rests on providing secure energy. Therefore, German policy makers have to balance between having healthy relations with energy supplying countries while searching for alternatives, which ranges from energy efficiency measures to alternative supply routes or investing in renewable energy technologies. Being aware of these, Germany has shifted its energy policy into a more active one when compared to the Cold-War period. Before the details of Germany's growing activities in energy policy, it would be helpful to provide an outlook for Germany's position in energy sectors.

Table 2.5 on the next page shows the energy balance for Germany which provides general information about the consumption levels and the sources of consumption on the basis of energy resources.

2.4.1.1. Energy Demand in Germany

Total primary energy supply (TPES) of Germany is the highest among the European Union member states. Germany's TPES level is almost double of Italy's and greater than French and British TPES levels. In concrete terms, Germany needs around 350 million tons of oil equivalent energy sources in order to satisfy its national requirements. Among these resources oil has the lion's share with almost one third of the total energy demand. Only less than 0.5 percent of the total oil supply is provided by the own resources of Germany. The 99.5 percent of the oil necessary for German economy, on the other hand,

Table 2.5. Energy Balance for Germany*

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	53371	4549	0	14048	43591	1714	3294	16190	0	0	136757
Imports	29779	111977	37589	75626	0	0	0		4168	0	259150
Exports	-697	-560	-27426	-9211	0	0	0	-65	-5628	-4	-43591
International Marine Bunkers	0	0	-2556	0	0	0	0	0	0	0	-2556
Stock Changes	-187	-936	912	-990	0	0	0	0	0	0	-1202
Total Primary Energy Supply	**82267**	**115030**	**8519**	**79473**	**43591**	**1714**	**3294**	**16135**	**-1460**	**-4**	**348559**
Transfers	0	3676	-3037	0	0	0	0	0	0	0	638
Statistical Differences	1745	365	-15	-531	0	0	0	-5	0	0	1559
Electricity Plants	-62715	0	-1316	-4745	-43591	-1714	-2832	-18	45933	0	-71000
CHP Plants	-6855	0	-1204	-13306	0	0	0	-6043	8194	15451	-3762
Heat Plants	-32	0	-186	-406	0	0	-27	-204	0	3862	3007
Gas Works	0	0	-19	17	0	0	0	0	0	0	-2
Petroleum Refineries	0	-125031	123055	0	0	0	0	0	0	0	-1976
Coal Transformation	-4325	23	-1232	-43	0	0	0	0	0	0	-5577
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transformation	0	5938	-6081	0	0	0	0	0	0	0	-143
Own Use	-1000	0	-6696	-405	0	0	0	-75	-4971	0	-13147
Distribution Losses	-388	0	0	-216	0	0	0	0	-2477	-1506	-4587
Total Final Consumption	**8696**	**0**	**111789**	**59838**	**0**	**0**	**434**	**9790**	**45219**	**17804**	**253569**
Industry sector	**7449**	**0**	**3882**	**17255**	**0**	**0**	**0**	**1027**	**19729**	**7633**	**56974**
Transport sector	**0**	**0**	**58443**	**0**	**0**	**0**	**0**	**3467**	**1402**	**0**	**63311**
Other sectors	**979**	**0**	**26714**	**40434**	**0**	**0**	**434**	**5296**	**24089**	**10170**	**108116**
Residential	600	0	18187	28804	0	0	423	5296	12169	0	65479
Commercial and Public Services	355	0	6836	7309	0	0	11	0	11206	0	25717
Agriculture / Forestry	21	0	1628	258	0	0	0	0	714	0	2621
Fishing	0	0	0	0	0	0	0	0	0	0	0
Non-Specified	2	0	64	4063	0	0	0	0	0	10170	14299

* in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=DE.

is imported from other countries. Oil is followed by coal and gas as the main commodities in the energy balance sheet of Germany with the shares of 23.5 percent and 22.5 percent, respectively.

Contrary to the situation in oil, Germany is a coal rich country. With an annual production rate of about 53 million toe, German coal reserves constitutes an important part of country's own energy resources. In other words, almost 65 percent of the necessary coal for the German industry is provided by indigenous resources. Therefore, coal and its derivatives have a primary importance in German energy mix in order to diminish the high level of energy dependency.

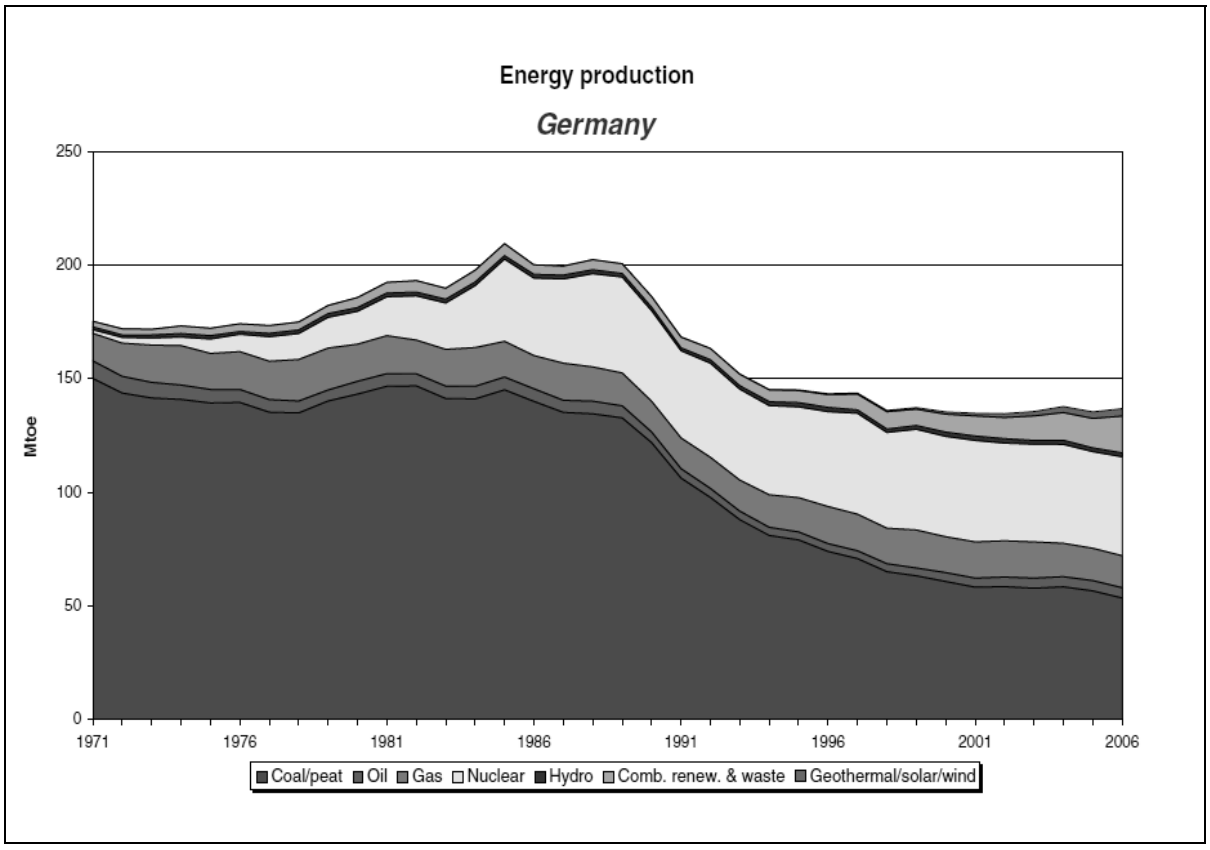
Natural gas is also an important element for Germany. The use of natural gas has been steadily increased in the recent decades as it was in the case of almost all European countries. Annual natural gas necessary for German economy is about 80 million toe. Germany has a production level of 14 million toe of natural gas which is slightly below 20 percent of its total primary gas requirement. Out of this figure, Germany exports some natural gas to its neighboring countries, which means that Germany have –at the moment– ability to access more natural gas than its economy requires. However, the increasing trend in favor of natural gas consumption makes it necessary to find new natural gas sources.

Another crucial energy source for Germany is nuclear power. Germany does not import or export nuclear energy yet produces 43.5 million toe by the existing nuclear power plants. Nuclear energy has a share of 12.5 percent in total primary energy supply of Germany. It seems that German governments are trying to be in conformity with the targets put forward by the European commission for uninstalling the nuclear power plants. However, the need for diversification of energy resources can be a real problem for the governments who sincerely wishes to abolish nuclear energy.

As for the other energy types, Germany has a very limited solar, hydro or geo-thermal resources due to the geographical features of the country. Among them, wind power is the most promising source of energy in Germany with the increasing number of wind tribunes all over the country. Besides the clean energy types, combustible renewable wastes have a share of slightly more than 10 percent among the whole energy produced in Germany.

Figure 2.2 shows the level of Germany's energy production for the last 35 years. The level of coal production has sharply decreased from 150 million toe to 50 million toe. Most of this decline has been compensated by the increased use of nuclear energy. The role of renewable sources has also been growing since 1970s. Furthermore, clean energy sources such as geothermal, solar and wind has also been in an increasing element of German energy production since the early 2000s.

Figure 2.1: The Sources Energy Produced in Germany



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

A sectoral approach to the demand and supply figures of German energy industry is also worth to consider. Almost 85 percent of the coal consumed in industrial sector and only less than 1 percent of the coal is used in residential purposes. The transportation sector, on the other hand, is the primary sector that uses most of the oil and petroleum products. The share of transportation in total final consumption of oil and petroleum products is around 52 percent. Other sectors are responsible almost for a quarter of oil consumption and the residential use of oil is around 16 percent of the total oil consumed in Germany.

Gas consumption, on the other hand, is vitally important for public health because of wide-spread use of natural gas in residential heating. The annual consumption of natural gas in residential sector is close to 30 million toe. Furthermore, it is clear that the industry and other sectors are also heavily dependent on natural gas in German economy. The industry sector uses almost equal amount of natural gas and electrical energy during the production process, which means that German industry is as much dependent on natural gas as electricity provided by the national electric grid. This shows the strategically important role of natural gas not only in residential sector but also in industrial sector in Germany.

The situation is a little bit different when we talk about other energy resources. The nuclear power, for example, is solely used for producing electricity generation at the nuclear plants. Other means of power generation systems i.e. geo-thermal, wind power or combustible renewables, provide energy mainly for the industry sector and other sectors.

This general picture of a sectoral analysis depicts us that as one of the most industrially developed economy at the global scale, German economy is excessively dependent on hydro-carbon resources. As far as coal is considered, the situation is sustainable with regards to the current level of German coal reserves. However, the absence of oil reserves in Germany and insufficient level of gas production increases the risks of energy security. Providing long term energy resources is not only a critical question for the industry but also for the public health and common good because the transportation sector, residential and public services are also heavily dependent on imported hydro-carbon resources.

After examining the details of Germany's energy demand figures, another important question emerges in order to grasp the general German position in terms of energy security: What are the main energy sources of Germany? To answer this question, a short analysis of Germany's energy suppliers would be helpful.

2.4.1.2 Energy Suppliers of Germany

As it was mentioned above, Germany is not a self-sufficient country in terms of energy resources. A simple look to the total energy supply for Germany also helps us to grasp the current situation in Germany's energy supply. Figure 2.2 shows Germany's total energy

supply between 1971 and 2006. It is clear that the decline in German coal resources is mainly substituted by an increase in the use of natural gas. Although the level of oil supplies have not changed at a significant amount, natural gas supplies have almost been tripled in last three decades. The nuclear and other sources of energy production have also depicted an increase in this period yet those supplies are produced by using internal sources of Germany. On the other hand, oil and gas supplies, which constitute more than half of the total primary energy supply, are provided by the external energy providers. The imported energy has increased notably since 1990 by 30 percent.[196] In other words, Germany has become more and more energy dependent in the last two decades.

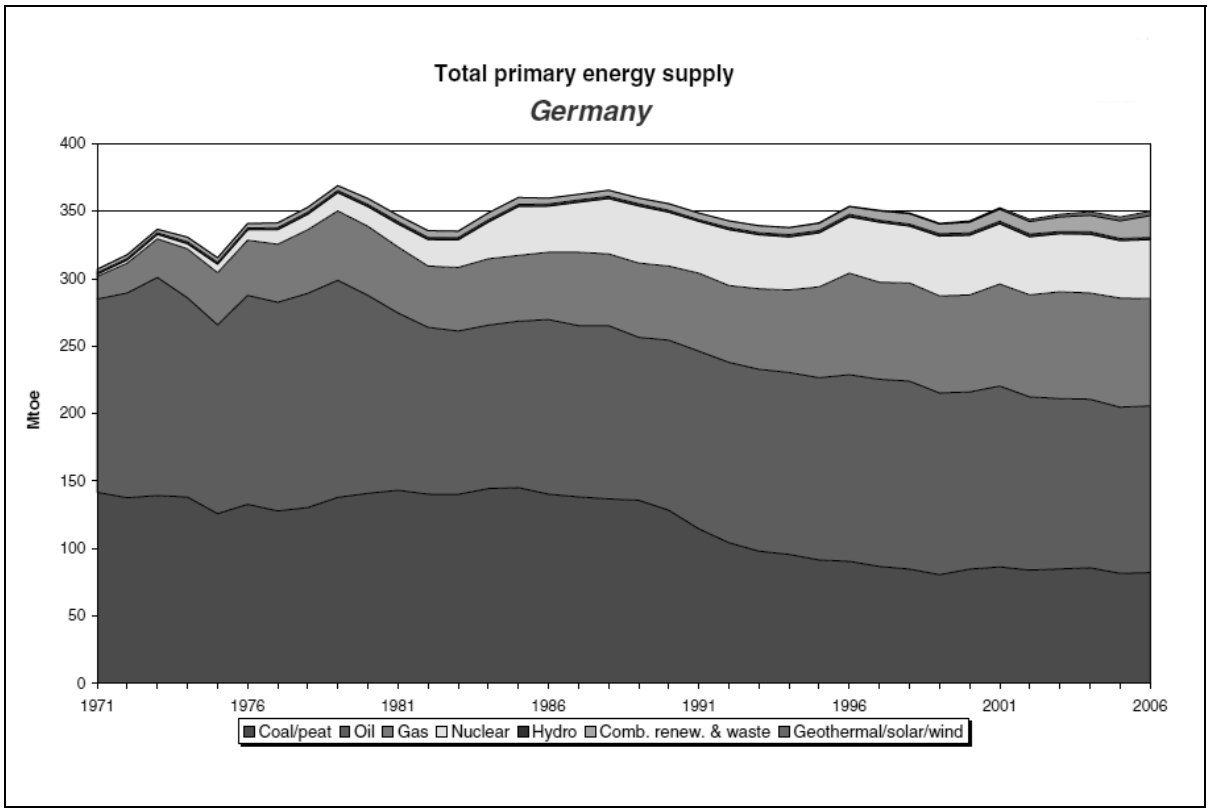
Being dependent on foreign energy resources is not something peculiar to Germany. Most of the industrially developed nations are energy dependent because of their insufficiency in producing necessary energy on their own territory. However, the main question for those energy dependent countries is how to secure their energy supplies. In order to have more flexibility and leverage in foreign policy, being dependent on one country or allied countries may decrease the security of a state. Therefore the European Union and Germany continuously stresses the importance of diversification as a part of energy security policy.[197] The diversification of oil may be comparably easier than diversification of gas because oil can be easily transferred from any part of the world by vessels. However, transfer of gas is not as cheap as oil unless pipeline systems are preferred.

If we look at the German oil and gas imports, we realize that two main neighboring countries have dominated the hydro-carbon trade. These are Norway and Russian Federation. As for the oil market in Germany, Russia holds 40 percent of total oil supply. Norway provides 21 percent of Germany's imported oil. The rest is provided by UK and Libya. Saudi Arabia and Syria also exports oil to the German market.[198] Similar to the oil market, Russia leads in German gas market by a share of 40 percent, and followed by

[196] Germany-Energy Mix Fact Sheet, 2007, Brussels: European Commission, p.2, retrieved 25 March 2008 from http://ec.europa.eu/energy/energy_policy/doc/factsheets/mix/mix_de_en.pdf.
[197] For European Commission's policy of diversification, see: COM(2006)105 final. For Germany's policy of diversification see BMWI, *Report by the German Government on the Oil and Gas Market Strategy.*
[198] Harks, Enno, *Europe's Future of Oil and Gas Supply – North, East or South?* SWP Working Paper FG 8, 2004, p. 4.

Norway which accounts for almost 30 percent of gas imports. The third biggest natural gas supplier of Germany is Netherlands with a share of 22 percent. The rest is provided by United Kingdom, Denmark and other European and Eurasian countries.[199] It is clear that Germany has highly dependent on a few suppliers as far as natural gas is considered.

Figure 2.2: Total Primary Energy Supply for Germany



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

2.4.1.3 German Government's Policies towards Energy Security

The official approach of Germany to the energy politics follows a similar path to the official policy of the European Union. Germany's responsible authority for formulation and implementation of energy policy – Federal Ministry of Economics and Technology (Bundesministerium für Wirtschaft und Technologie / BMWi) – declared the three central aims of German energy policy as: efficiency objective, supply security objective and environmental compatibility objective. [200] Firstly, by the efficiency objective, the Ministry

[199] BP Statistical Review of World Energy, June 2007, p. 30.
[200] BMWi, Energy Policy, see: http://www.bmwi.de/English/Navigation/energy-policy.html

stresses the importance of market economy structures and effective competition for the economically use of energy. According to the BMWi, liberalization of gas and electricity markets at European level is not only vitally important for the benefit of industrial and private consumers, but also will contribute to the international competitiveness of German energy sector.

Secondly, the BMWi concentrates on providing sufficient sources of energy in order to meet the excessive German demand by putting forward the supply security objective. Ministry's supply security objective includes ensuring a diverse mix of energy resources as well as resting on different suppliers from around the world. This policy also covers the efforts to phase out nuclear energy and other activities in order to increase energy saving measures.

The final objective of the BMWi is related to the concerns over environmental protection. Promoting rational use of energy, increasing the use of renewable energies, and other efforts to protect the environment from the negative impacts of energy has been regarded as important elements of this objective. The German Government has launched several initiatives for this purpose.

In line with these principal objectives German policy makers implements an energy policy. The government officials assume that in the following decades most of the energy supplies will be under the control of unstable producer or transit countries.[201] In other words, the supply risks will increase because renewable energy supplies will be far less than satisfying the energy need. According to the German bureaucrats, "Fossil energy sources will account for more than four-fifths of global energy consumption in 2030. Oil will continue to be the most important primary energy source in 2030, accounting for 35 percent of consumption."[202] They also assume that despite having the largest reserve levels, share of coal will decline further in the next two decades. Natural gas, on the other hand, will increase its share in global energy consumption and will become the second important resource after oil by the year 2030.

[201] BMWi Communication and Internet Division, EWI/Prognos - Study: The Trend of Energy Markets up to the Year 2030, Documentation No: 545, Berlin: 2005, p. 13.
[202] *Ibid.,* p. 16

According to the Federal Ministry's report, Europe is advantageous in access to natural gas supplies because of its proximity to the largest portion of world natural gas reserves. The German bureaucrats are also contended that competition among European, American and Asian consumers of natural gas will continue to increase as well as the increasing trend of LNG trade. In other words, a Europe-Asia competition will be on agenda for the Russian, Caspian and the Middle East gas whereas an LNG competition will probably dominate the energy relations between the US and Europe.[203]

The energy bureaucracy in Germany also expects some shifts with regards to the structure of primary energy consumption. The share of natural gas and renewable energies will rise whereas use of coal will significantly drop below the current level. Moreover, the nuclear energy will be out of energy mix in Germany in long-term.

In light of these principle objectives, German Government has defined two types of (demand-side and supply-side) elements in order to limit the risks of import dependency in oil and natural gas.[204] Firstly, since Germany is an importer of oil and gas, the rising oil and gas prices results in a substantial burden on the German economy, which causes a transfer of real income from Germany to the oil and gas exporting countries. Therefore, controlling the energy demand should be an indispensable part of an energy strategy according to the German Government. For this purpose, the Government adopted an Integrated Energy and Climate Programme (IEKP) in August 2007. The IEKP entails an ambitious strategy for achieving higher levels of energy efficiency and expanding the use of renewable sources of energy. This programme contains measures of energy efficiency such as enhancing energy saving in building sector or initiatives to diminish fuel consumption in transportation sector.[205] The government also declared that a competitive energy market is an element of its energy market strategy and defends a more effective unbundling of energy utilities at the EU level.[206] However, the actual dominant positions of

[203] *Ibid.,* p. 18
[204] The Federal Government adopted on 5 November 2008 a report on defining its strategy for providing a secure oil and gas market in German. See: BMWi, *Report by the German Government on the Oil and Gas Market Strategy,* 2008, http: http://www.bmwi.de/English/Redaktion/Pdf/report-oil-gas-market-strategy,property=pdf,bereich=bmwi,sprache=en,rwb=true.pdf
[205] Bundesministerium für Umwelt, Naturschutz und Reactorsicherheit, *The Integrated Energy and Climate Programme of the German Government,* December 2007.
[206] BMWi, 2008, p. 3.

the two giant energy companies in Germany put this statement German Government into question.

Secondly and more crucially, supply-side elements constitute the foreign policy part of the German Government's oil and gas market strategy. The government believes that certain degree of investment should be made for developing energy sources in producer and transit countries. Moreover, the producer countries should be encouraged to invest in Germany as well. This will bring solidarity and security of supply because there will be shared interest between producing and consuming countries. This argument of the German Government can be best seen in its special energy relations with Russia and found a place in its energy market strategy report:

> Russia is Germany's largest energy supplier and Germany is Russia's largest energy market. The high proportion of German imports from Russia has a history going back many decades. With gas delivery contracts lasting up to 2030 and beyond, German firms have a secure foundation for deliveries in this field. In previous years, Russia has always proved to be a reliable supplier. This partnership must be expanded further.[207]

Being very much dependent on Russian gas, Germany needs to have stable relations with Russia. After the 2006 natural gas crisis between Russia and Ukraine, Russia's reliability has been questioned in European policy circles. However, German policy makers believe that the Russian gas has no alternative yet and should be accepted as 'reliable' since it can directly arrive in German market. On the other hand, the Government also stresses the importance of diversification of sources of supply and the transit routes for energy transport. The Report mentions the Nabucco pipeline project as an important contribution to the trans-European energy network. Although the Nabucco project ends in the territory of Austria and do not enter into the borders of Germany, the Federal Government perceive it as an important contribution to diversification problem. As well as relations with suppliers and transit countries, German Government indicated the importance of storage capacities in order to cope with crisis situations. Germany has the forth largest natural gas storage capacity after U.S., Russia and Ukraine and points out that the other member states of the EU should concentrate on storage capacity investments for not being frustrated in cases of gas disruptions. The German Government also indicated

[207] *Ibid,* p.4.

that "mutual solidarity will only become possible on the basis of efforts undertaken by the member states".[208] This can be read as a confession by the German Government for the difficulty of forming a common policy on energy issues at the EU level.

To sum up, the Federal Government of Germany has declared some ambitious objectives for the security of energy supply. The demand side strategies may have considerable effect in the course of time depending on the technological innovations in energy saving and renewable energy production systems. However, the control of supply side does not have any regular determinant. The policies of supplier or transit countries are generally out of Germany's control. In that sense, developing and sustaining friendly relations with those countries as well as searching for new suppliers are the central tenets that an energy importing country should follow. Germany declared the importance of these priorities in its report. However, sometimes the priorities of Germany in the field of energy may contradict with the priorities of other member states or Union in general. In that case, divergences emerge between declared and de facto policies of the member states. These divergences and preferences will be analyzed in the final chapters in more detail.

2.4.2. Energy Policy of France

France is one of the leading member states of the EU and it has a considerable power in decision making process of the EU. Therefore its decision in energy politics is extremely important. However, unlike Germany, the French energy mix depicts a different scheme in which nuclear power constitutes the highest portion of total primary energy supply. France is also highly dependent on external sources as far as hydro-carbon resources are considered. Yet, the capability of France in nuclear power generation provides her a considerable leverage in its foreign policy and a different path from other member states in its approach to energy policy formation process. France exhibits an energy import dependency with the average EU dependency levels.[209]

Before the details of French preferences in energy policy, it would be helpful to provide an outlook for the position of France in energy sectors. Table 2.6 on the next page shows

[208] *Ibid.,* p. 5.
[209] France-Energy Mix Fact Sheet, 2007, Brussels: European Commission, p.1, retrieved 30 March 2008 from http://ec.europa.eu/energy/energy_policy/doc/factsheets/mix/mix_de_en.pdf.

the energy balance for France which provides some general information about the consumption levels and the sources of consumption on the basis of energy resources.

2.4.2.1. Energy Demand in France

Total primary energy supply of France is considerably above the EU level. After Germany, France is the second largest energy consuming member state among EU with 272 million tons of oil equivalent energy supply. This amount corresponds about 2,5 percent of total world energy supplies. As mentioned above, the lion's share in France's energy mix belongs to nuclear power. Slightly more than 40 percent of the total energy supply is provided by the sources of nuclear power. As it is indicated in Figure 2.3, France is not only the first among European countries in nuclear power, but also has the second largest nuclear capabilities at global scale after the United States.

Despite having less than 0,01 percent of the world fossil fuel reserves on its own territory, the figures of France depict a large amount of oil and gas consumption rates. As it's shown in Table 2.6, almost one third of its primary energy supply comes from crude oil and petroleum products which is equal to just above 90 million toe. Without having any oil reserves, this figure means that France is highly dependent on external countries in satisfying the necessary demand of its economy.

Although France is less dependent on natural gas when compared to Germany, the share of gas in its energy mix is around 15 percent, which is equal to 40 million toe of natural gas. Similar to oil, own production of natural gas is very trivial in France and only 1/40 of the necessary natural gas is produced in France.

The share of French coal in the country's energy mix is not as high as the level in Germany. French economy consumes 14 million toe of coal, which equals to 0,04 percent. Moreover, almost all the necessary coal is imported from external sources.

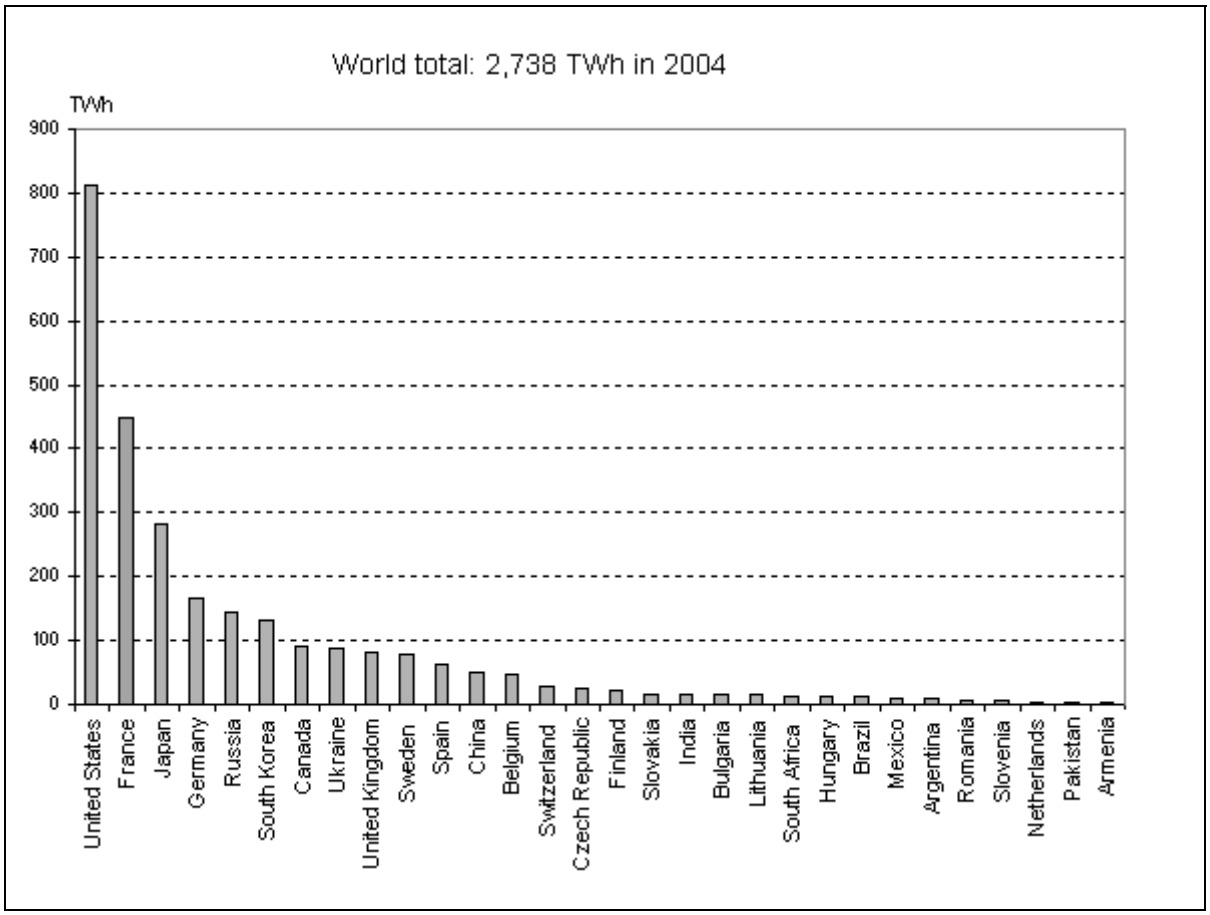
Table 2.6. Energy Balance for France

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	281	1100	0	1058	117353	4801	388	12070	0	0	137021
Imports	14392	82006	38277	40137	0	0	0	0	733	0	175557
Exports	-558	-20	-27898	-679	0	0	0	0	-6180	0	-35334
International Marine Bunkers	0	0	-2824	0	0	0	0	0	0	0	-2824
Stock Changes	-919	168	-100	-903	0	0	0	0	0	0	-1753
Total Primary Energy Supply	**13197**	**83254**	**7455**	**39613**	**117323**	**4801**	**388**	**12082**	**-5447**	**0**	**272666**
Transfers	0	2867	-2668	0	0	0	0	0	0	0	199
Statistical Differences	230	-161	106	62	0	0	0	48	0	0	285
Electricity Plants	-5743	0	-1651	-503	-117323	-4801	-231	-672	46913	0	-84011
CHP Plants	-492	0	-946	-5026	0	0	0	-830	2038	3814	-1442
Heat Plants	0	0	0	0	0	0	0	-270	0	136	-135
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-87433	88335	0	0	0	0	0	0	0	902
Coal Transform.	-2778	0	-30	0	0	0	0	0	0	0	-2808
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transformation	0	1474	-1533	0	0	0	0	0	0	0	-59
Own Use	-462	0	-3892	-173	0	0	0	0	-3795	0	-8322
Distribution Losses	0	0	0	-586	0	0	0	0	-2736	0	-3322
Total Final Consumption	**3952**	**0**	**85175**	**33387**	**0**	**0**	**157**	**10358**	**36973**	**3950**	**173952**
Industry sector	**3597**	**0**	**6295**	**9265**	**0**	**0**	**0**	**1568**	**11945**	**0**	**32670**
Transport sector	**0**	**0**	**49013**	**62**	**0**	**0**	**0**	**713**	**1061**	**0**	**50849**
Other sectors	**356**	**0**	**16907**	**22435**	**0**	**0**	**157**	**8076**	**23967**	**3950**	**75848**
Residential	356	0	9321	14610	0	0	115	7614	12639	0	44655
Commercial and Public Services	0	0	4650	4942	0	0	32	423	10887	0	20934
Agri. / Forestry	0	0	2229	266	0	0	9	40	283	0	2827
Fishing	0	0	360	0	0	0	0	0	10	0	370
Non-Specified	0	0	346	2618	0	0	0	0	149	3950	7062

***** in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=DE.

Other sources of energy, such as hydro, geo-thermal or combustible renewable and wastes have also a trivial share in total primary energy requirement of France. The total of these sources is below 0,1 percent of total energy demand of French economy. Figure 2.4 illustrates the extreme dominance of nuclear energy in French domestic energy production. After the oil crisis experienced in 1970s, French governments have invested huge amounts in nuclear energy facilities in order to prevent the losses caused by energy dependency.

Figure 2.3. Nuclear Power Generation by Country

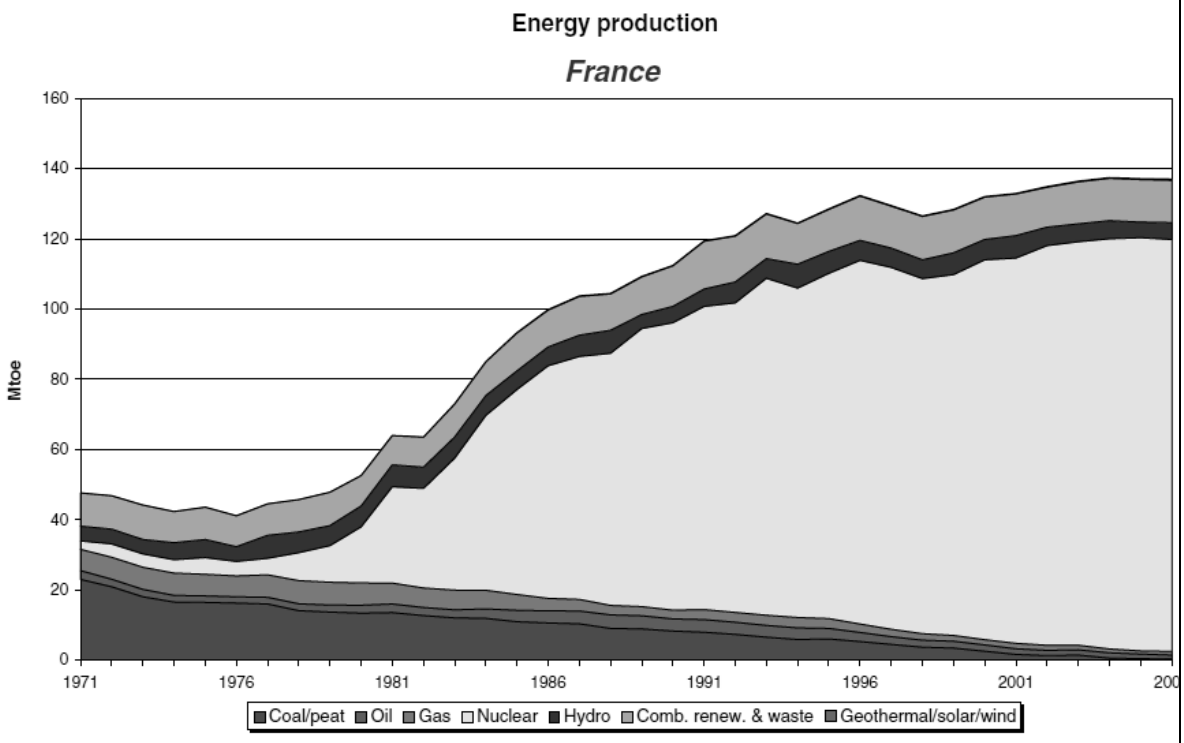


Source: Ministere de l'Ecologie de l'Energie du Developpement durable et de la Mer (Ministry of Ecology, Energy and Sustainable Development), http://www.developpement-durable.gouv.fr/energie/anglais/politique-energetique.htm#1

Despite the decisions of the EU, the contribution of nuclear energy to the French energy sector has been steadily increasing. On the other hand, the share of renewable sources has steadily been growing since the early 1990s. However, the main determinant in French energy policy is extremely dominated by the nuclear power.

A sectoral analysis of the demand and supply figures of French energy industry may also contribute to understanding the French energy policy making process. With reference to the Table 2.6., transportation sector consumes more than half of the total oil consumption due to the growth in road transport of passengers and goods in the last two decades.[210]

Figure 2.4: Total Primary Energy Supply for France



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

Natural gas, on the other hand, is mostly used by the non-industrial sectors and in residential purposes. The electricity produced by nuclear plants is intensively used by industry sector and other sectors. A quarter of the total electricity produced by nuclear energy is used in residential purposes. In other words, transport sector, services and other sectors as well as residential use of energy constitutes almost two-third of the energy

[210] Ministere de l'Ecologie de l'Energie du Developpement durable et de la Mer, 2008, *France's Energy Situation,* retrieved 30 March 2008 from http://www.developpement-durable.gouv.fr/energie/anglais/politique-energetique.htm#1

requirement in France. This sectoral conclusion gives an important hint for this study because the role of natural gas in France is very restricted when compared to Germany and other member states. Particularly a sudden fall in natural gas transfer neither hampers the functioning of industry nor affects the daily life of French citizens at a great extend.

After having a look at French energy demand structure, we realized that a considerable part is supplied by external resources. Therefore, it is important to evaluate the origin of destinations of the imported fossil fuel routes. How reliable the suppliers are an important determinant for estimating the French position in French contribution to the energy policy implementation at EU level.

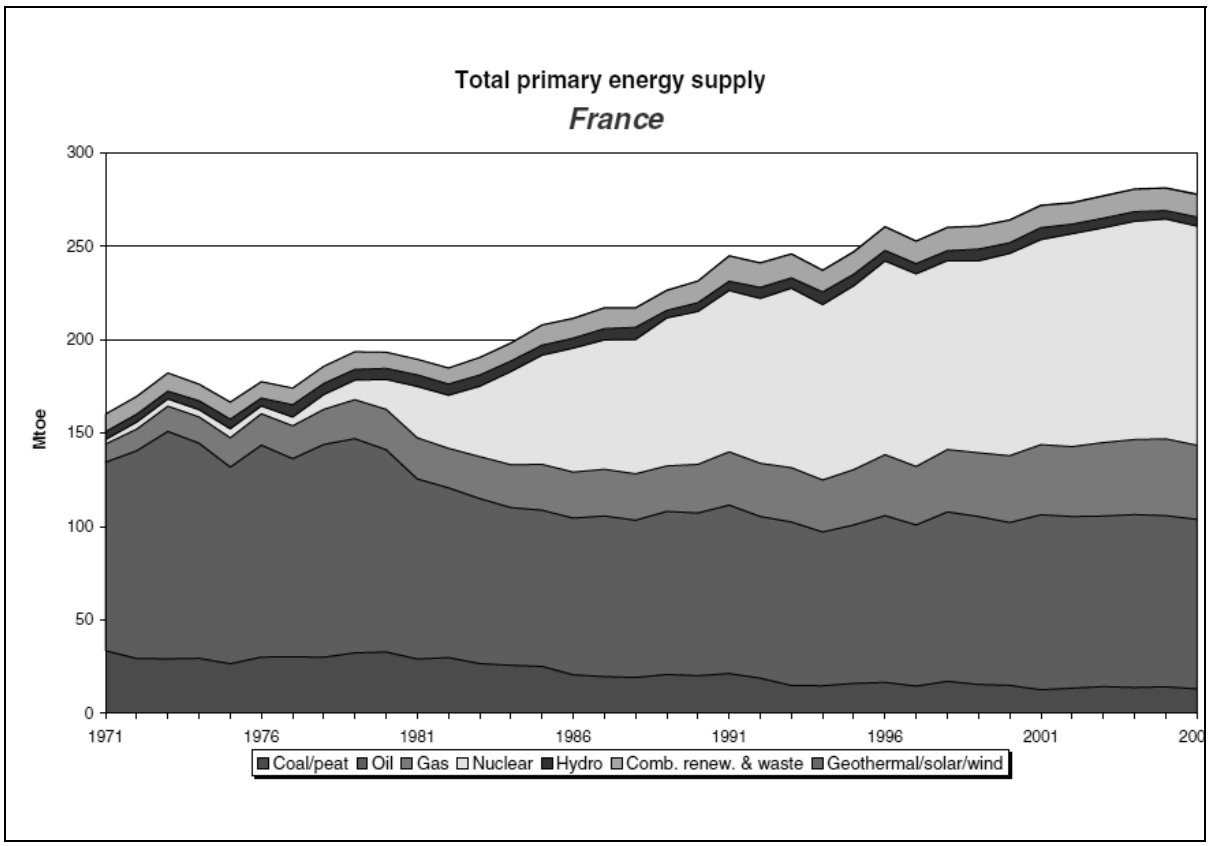
2.4.2.2 Energy Suppliers of France

As it was clearly stated above, France has developed a huge nuclear energy capability because of its insufficient indigenous hydro-carbon resources. However, the nuclear energy constitutes less than half of France's energy requirement. The rest of the energy need is imported from different destinations. Figure 2.5 shows the total energy supply in France between the years 1971 and 2006. Within this period, the use of coal is steadily decreasing similar to the case in Germany. However, different from Germany, France does not have as much coal reserves as Germany. This means that this decline in coal reserves may decrease further in the following years.

The use of oil, on the other hand, has a very steady pattern for the last three decades. There were some sharp reductions during the global oil crises, yet returned back to its normal level in a short time. However, natural gas has a different graph. The use of natural gas in France's energy mix was very limited in early 1970s. After the oil crises of 1070s, the use of gas increased. Moreover, the decline in the use of coal also contributed to this trend and gas consumption has been growing since the mid-1980s. In more concrete terms, gas imports have increased by 55 percent over the period 1990-2004, which reflects an increased demand in France.[211]

[211] *Ibid,* p.2

Figure 2.5: Total Primary Energy Supply for France



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

Different from Germany, France relies on different countries as suppliers of hydro-carbon resources. Together with this, the diversification of energy types of France is also different from Germany. France does not only import oil and natural gas but also LNG at a certain level. As for the import of natural gas, France is heavily dependent on Norwegian natural gas with a share of almost 40 percent, which is followed by imports from Russian Federation and the Netherlands. Russia provides one-forth of the total natural gas provided by pipelines. Similarly the Netherlands has a share of a quarter in France's natural gas market. The outlook of French natural gas shows that the French government has achieved a better diversification of suppliers when compared to Germany. In addition, they also have the advantage of resource diversification by using LNG, which equals to more than one-third of the natural gas imported by the pipelines. The greater share in LNG imports belongs to Algeria. Algerian share is slightly above the half of the total LNG imports of

France. Nigeria provides one-third of the imported LNG. Egypt has also had a 20 percent share in French LNG market.[212]

As the world's fourth largest oil importer, France has several oil suppliers. Most of the oil imports of France come from Saudi Arabia and Norway. United Kingdom, Iran, Iraq, Nigeria and Russian Federation are other prominent suppliers for France. Therefore, it can be said that France has already achieved a considerable level of diversification of suppliers as far as oil is considered.

Despite all of the efforts to diminish energy dependency, i.e. increasing the share of nuclear and renewable energy sources, French government has to develop stable relations with energy providing states. The current level of imports from certain countries may satisfy the French energy need, yet there is no guarantee that these resources will be secure in the future. The declining levels of Norwegian and other European resources as well as EU policies towards reduction in the use of nuclear power may put considerable pressure on French government.

2.4.2.3 French Government's Policies towards Energy Security

The history of French energy policy has been characterized by a state-controlled structure. According to Sophie Meritet, this state oriented vision of French energy structure has to change with globalization of the energy markets, the construction of the EU, the multiplication of uncertainties and also financial constraints facing states for energy investment. Like all the other Member States, France has its own energy policy based on its national interest. French Government still has a dominant position in energy policy making but has to take into consideration the European point of view as well. [213]

At the rhetoric basis, Energy Act of 2005 defines the latest French approach to the energy policy. According to this act, four priority axes is emphasized: (1) National energy independence and the security of supply, (2) protection of human health and the

[212] European Gas Market, 2008, *The Oil Drum: Europe,* 2008, retrieved 30March 2008 from http://europe. theoildrum.com/node/4361.
[213] Meritet, Sophie, 2007, "French Perspectives in the emerging European Union energy policy"*, The 30rd I.A.E.E. Conference- International Association for Energy Economics,* Wellington*,* retrieved 30March 2008 from http://www.meritet.net/ Articles/Article%20Wellington.pdf, p. 3-4.

environment, (3) competitive energy prices at low cost for households and industries, and finally (4) social and territorial cohesion by ensuring all to access energy.

By the first priority area, the French government aims to diminish the negative impact of energy shortages on French economy and the daily lives of its citizens. The second priority area concentrates on the negative impact of energy production process on climate change issues and the control of pollutants and radioactive wastes. These two objectives are generally accepted by most of the member states. The latter two objectives are more peculiar to the French energy preferences. One of them, the third one, is about stabilizing the energy prices which may contribute to the well-functioning of French economy. Particularly in sectors where high energy consumption is necessary, the attractiveness of France in a strong international competition atmosphere can only be achieved by favorable energy prices. The final objective, which may also be regarded as specific to France, is about the access of every –even the most deprived– citizen to the energy sources with affordable prices.

In order to achieve these four main objectives the French government defined an action plan consists of four steps. The first step is to control energy demand by implementing incentives such as tax reduction. Second step is to diversify sources of energy supply. This step requires using high technology infrastructure for energy production as well as resorting renewable sources more in the production process. However, the most interesting point in this step is that it leaves an open door for the nuclear energy option. The third step is about developing transportation and storage capabilities for increasing safety in energy supply. In particularly, building new infrastructure for electricity and natural gas grids as well as storage facilities are the main activity areas of this step. Finally, investing on research and development projects is the forth step which has long-term consequences. Supporting the innovations in bio-energies, energy efficient vehicles and buildings, and 4th generation nuclear energy are all part of this step.

The Energy Act issued in 2005 is generally compatible with most of the official documents of other member states or the European Commission's Green Paper. However, there are some certain questions remained within this act. This may cause a contradiction in itself while the French Government implements this act. For example, one of the main

aims of the act mentions the objective of developing policies for ecological and health safety. On the other hand, the act favors the economical way of producing energy for the reasons of employment and competition in international trade. Therefore, an important question emerges here: Which objective will prevail when these two objectives contradict with each other? Will the French Government be ready to decide in favor of environmental concerns when the economic benefits of the French industry are at stake? The answers of these questions have impact on the whole European energy policy process. Some of the unwritten declarations of the government officials, which will be discussed in later chapters, show that France is not very much willing to leave the nuclear energy leverage in order to comply with the EU energy norms.

2.4.3. Energy Policies of Italy

As one of the leading EU member states and potential great power in European politics, Italy has a huge industrial sector relying mostly on imported energy. Italy's population is over 60 million people, which also requires energy for the purposes of transportation, heating and other social facilities. However, similar to the case in Germany and France, Italy's domestic energy resources are very limited, which leads Italy to rely heavily on energy imports in order to meet its high consumption rates. Therefore, energy security and diversification of energy sources are the key points of Italy's energy strategy. When compared to other bigger members of the EU, oil and natural gas constitute most of Italy's energy requirement. The share of these hydro-carbon resources in total primary energy supply of Italy is almost 90 percent. Before examining the details of Italy's energy policy for security of supply, it would be helpful to evaluate the current structure of energy in Italy. Table 2.7 on the next page summarizes energy balance for Italy. It clearly provides general information about energy consumption in Italy as well as the distribution of resources. The table also clarifies which type of energy is used in specific sectors.

2.4.3.1. Energy Demand in Italy

Italy is in the fourth place after German, France and UK as far as the level of energy consumption in the EU is considered. Italian economy requires about 185 million tons of oil equivalent energy sources according to the data provided by International Energy

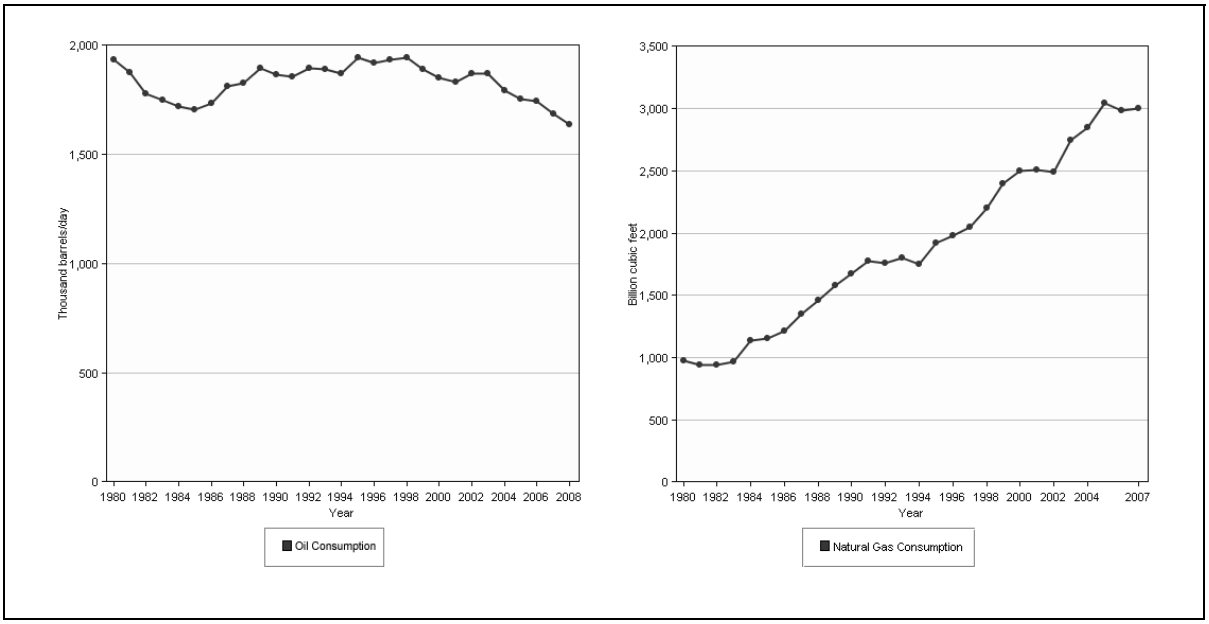
Table 2.7. Energy Balance for Italy

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	13	6103	0	8989	0	3181	5258	3883	0	0	27427
Imports	16768	93471	13386	63372	0	0	0		4007	0	191952
Exports	-152	-1706	-26457	-302	0	0	0	-2	-139	0	-28758
International Marine Bunkers	0	0	-3472	0	0	0	0	0	0	0	-3472
Stock Changes	45	307	-445	-2887	0	0	0	0	0	0	-2980
Total Primary Energy Supply	**16673**	**98176**	**-16988**	**69172**	**0**	**3181**	**5258**	**4828**	**3869**	**0**	**184169**
Transfers	0	0	70	0	0	0	0	0	0	0	70
Statistical Differences	0	108	-189	0	0	0	0	0	0	0	-81
Electricity Plants	-10453	0	-6442	-14045	0	-3181	-5010	-1319	17720	0	-22730
CHP Plants	-1044	0	-2821	-13447	0	0	0	-1174	8741	4989	-4755
Heat Plants	0	0	0	0	0	0	0	0	0	0	0
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-100364	100623	0	0	0	0	0	0	0	259
Coal Transform.	-2315	0	0	0	0	0	0	0	0	0	-2315
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transform.	0	2081	-2184	0	0	0	0	-82	0	0	-185
Own Use	-68	0	-5226	-328	0	0	0	0	-2062	0	-7683
Distribution Losses	0	0	0	-465	0	0	0	0	-1714	0	-2179
Total Final Consumption	**2794**	**0**	**66844**	**40888**	**0**	**0**	**248**	**2253**	**26555**	**4989**	**144569**
Industry sector	**2619**	**0**	**6648**	**14733**	**0**	**0**	**0**	**276**	**12673**	**0**	**36948**
Transport sector	**0**	**0**	**42785**	**413**	**0**	**0**	**0**	**161**	**879**	**0**	**44238**
Other sectors	**7**	**0**	**8526**	**24796**	**0**	**0**	**248**	**1817**	**13003**	**4989**	**53385**
Residential	7	0	5342	17042	0	0	35	1621	5817	0	29864
Commercial and Public Services	0	0	463	7605	0	0	0	0	6713	0	14781
Agriculture / Forestry	0	0	2341	149	0	0	0	196	467	0	3152
Fishing	0	0	243	0	0	0	0	0	6	0	250
Non-Specified	0	0	137	0	0	0	213	0	0	4989	5338

***** in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=IT.

Agency. Among all other sources of energy, oil is the primary source of energy demanded in Italian energy market. Crude oil constitutes more than 44 percent of the total energy demand in Italy. Although the demand for oil has declined in the recent years due to the global economic crises and high oil prices, oil seems to be the main energy supply for Italy for the foreseeable future. As mentioned above, Italy is not a rich country in terms of energy resources. The domestic oilproduction is only 5 percent of total demand for all crude oil and petroleum products of the country. Demand for oil is followed by natural gas with a share of 37.5 percent. The use of natural gas in Italy is continuously increasing in the recent years. The domestic production of natural gas is more promising when compared to oil. Approximately 12.5 percent of the gas is produced domestically within Italian gas fields. Most of the gas production in Italy comes from offshore fields in Adriatic and Ionian Seas as well as off the coast of Sicily. Italian energy company ENI search for new fields and tries to improve domestic production in order to compensate the increase in demand for natural gas.

Figure 2.6. Comparison of Demand for Oil and Gas in Italian Energy Markets



Source: Energy Information Administration, http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=IT.

Italian energy market is very different from other bigger member states of the EU. Oil and gas demand has dominated all energy market. Total share of oil and gas is almost 82 percent which means a high degree of rigid energy market in terms of fuel type. From this

point of view, Italian energy market is urgently in need of diversification based on fuel type. As for other types of energy, there is a very low demand for coal, geothermal, hydro and renewable resources. Among them, coal has a share of 8.5 percent and the others have a total share of 6-7 percent of the total energy demand. Interestingly, Italy has no nuclear energy plant and the share of nuclear power in its energy mix is zero. France has almost totally equipped with nuclear power. In addition, Germany and UK has a considerable share of nuclear energy in their energy mix. Italy, as a potential rival for those countries in terms of distribution of power, throws away the nuclear opportunity.

A sectoral approach to the demand figures of Italian energy market is also worth to evaluate Italian energy policies. Most of the total oil and petroleum products are used in transportation sector. Oil products are also used in industry and other sectors. The natural gas, on the other hand, is mostly used by industrial and other sectors. Residential use of natural gas is also increasing in Italy. Other forms of energy resources are generally used by industrial sectors as well as residents in the form of electricity.

In light of the demand situation, it is clear that Italian policy makers should not only diversify the energy suppliers but also fuel types. Otherwise the country will be extremely open to external influence of both suppliers and its potential great power rivals. An analysis of suppliers would help to comment more on the fragility of Italian energy market.

2.4.3.2. Energy Suppliers of Italy

As mentioned in this part before, Italy displays by far the highest supply security problem across G7 members due to the limited energy mix structure of the country and its resource poverty.[214] Italy depends so heavily on oil and natural gas imports, with shares of 93 and 88 percent respectively. Among the oil suppliers of Italy, Libya is the leading energy partner. This country provides almost one third of oil necessary to Italian economy.[215] In line with the increasing trade relations between Russia and Italy, oil trade is also worth to consider. As the major gas supplier, Russia also provides nearly one-fifth of

[214] Frondel, Manuel et.al., 2009, "Measuring Energy Supply Risks: A G7 Ranking, "Ruhr Economic Papers 0104, Rheinisch-Westfälisches Institut für Wirtschaftsforschung, Ruhr-Universität Bochum, Universität Dortmund, retrieved 21 July 2009 from http://ideas.repec.org/p/rwi/repape/0104.html#provider.
[215] Willams, Stephen, 2009, “Gaddafi Conquers Rome”, 2009, *African Business,* No: 355, pp. 62-63.

the oil supply of Italy.[216] Italy has also a tight oil trade with Iran. Crude oil imports constitute 85 percent of trade with the current trade level of Iran, which is equal to 8 billion USD.[217] Moreover, Italy has developed warm ties with Iran compared with other EU states and several Italian companies are operating actively in Iran.[218] Despite the American threat on companies developing relations with Iran, Italian energy giant ENI has continuously invests in Iranian oil and gas fields since early 2000s.[219] Saudi Arabia is another main supplier of Italy with a share around 10 percent of oil demand in Italy. Syria, Iraq and Norway also provides oil supplies to Italy with amounts between 5-7 percent of demand changing due to current political and economic developments.[220] As a concluding remark for oil suppliers, it may be argued that Italy has also problem in diversification of suppliers. Relying heavily on Libya and Russia may bring deficiency to Italian foreign policy decisions in relations with these countries.

As for the natural gas, the outlook of suppliers depicts a similar picture to the oil suppliers. Figure 2.7 shows that Italian gas market is dominated by Algerian and Russian gas with approximately 25 and 22 bcm annual supply respectively. Netherlands and Norway follow these two suppliers with less than 10 bcm supply of gas annually. Most of the downstream market in Italy is controlled by ENI. This company's national network is connected to three main international large-sized gas pipelines. TENP pipeline is 924 km long and carries Norwegian gas to Italy. TAG is a 1018 km long pipeline connects Italian national hub to Russian resources. TTPC and TMPC (742 and 575 km long) are the pipelines that connect Algerian gas resources to the Italian mainland.[221] These are the

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[216] Giusti, Serena, 2008, "The Ambiguous Effects of the Rome-Moscow Bipartisan Axis on the EU Policy Towards Russia", *Italian Foreign Policy*, No: 9, retrieved 25 July 2009 from http://www.foreignpolicy.it/adon/files/giusti.rtf.

[217] Italy a reliable trade partner, 2009, *Iran – Italy Chamber of Commerce, Industries and Mines,* retrieved 22 July 2009, from: http://www.iiccim.com/eng/news/?tp=2&id=596.

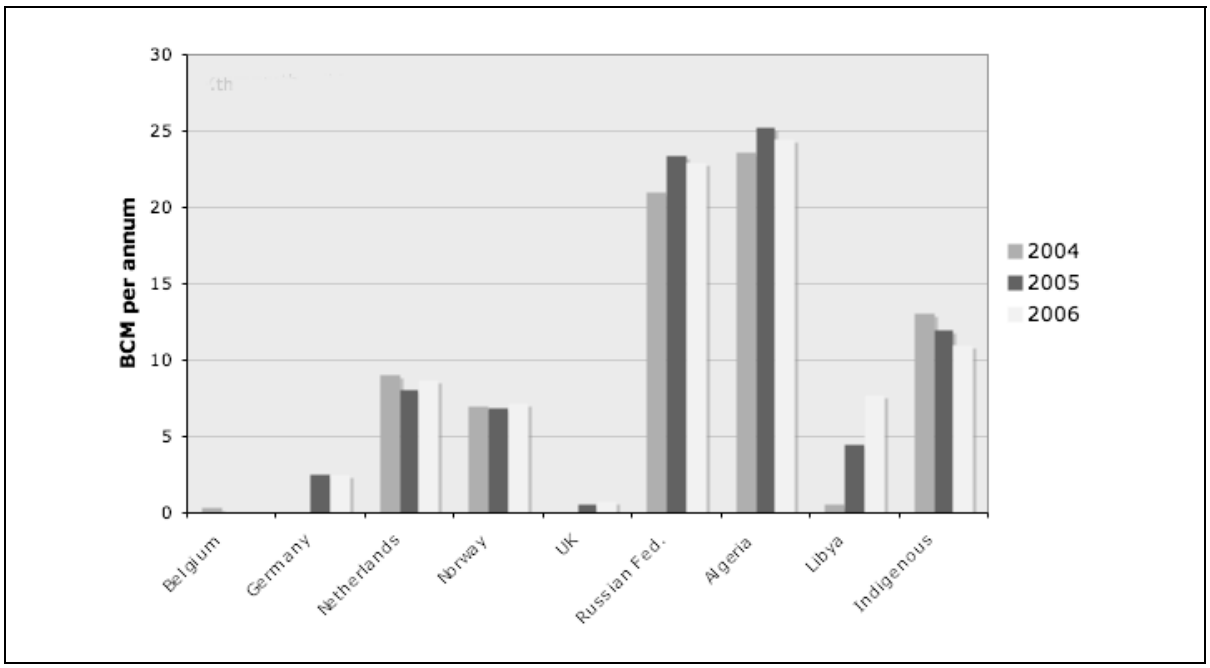
[218] Iran, Italy to sign oil deal today, 2008, *Tehran Times,* 9 January 2008, retrieved 22 July 2009 from: http://www.tehrantimes.com/index_View.asp?code=160914.

[219] Italy Oil Deal Renews Defiance of U.S. Iran Sanctions, 2001, *Tehran Times,* 2 July 2001, retrieved 22 July 2009 from http://www.tehrantimes.com/Index_view.asp?code=67478.

[220] ERG S.p.A. Annual Report, 2003, retrieved 23 July 2009 from http://www.erg.it/data/erg/en/investor Relations/financialStatementsReports/2002/Report-on-Operations/pdf/report_2002.pdf.

[221] How is natural gas imported to Italy, 2009, *ENI,* retrieved 22 July 2009 from http://www.eni.com/en_IT/faq/ gas-and-power/trading/faq-gp-import-gas-italy.shtml.

Figure 2.7. Natural Gas Imports of Italy between 2004 and 2006



Source: Oildrum, http://europe.theoildrum.com/node/4361.

traditional natural gas sources of Italy for more than three decades.[222] The domestic gas supplies, on the other hand, are in a process of depletion. Although the national energy giant ENI continuously searches for new oil and gas fields in Northern Italy and in the continental shelf of the Adriatic Sea, there is a downward trend in indigenous gas reserves. In order to compensate this decline of own resources and to solve the 'diversification of supplier' problem, Italy has recently intensified its relations with Libya. Between 2004 and 2006, the natural gas imports of Italy from Libya doubled every year. Following the lifting of sanctions on Libya in April 2004[223], international energy companies have been eager to enter the country to explore its largely undeveloped oil and gas reserves. Italy has traditionally close economic ties with this country and is urgently in need of diversifying its energy suppliers. Therefore, Libya is perceived as the best alternative energy supplier

[222] This long period of energy trade may be evaluated as a proof of reliability of supplier. From this point of view, Russia and Italy has long been natural gas partners. See: 40th Anniversary of the Russian gas supplies to Italy, 2009, *Gazprom,* retrieved 10 December 2009 from http://www.gazprom.com/about/history/events/italy40/.

[223] Italian government put excessive pressure at the EU level to lift the sanctions imposed on Libya. Although Italy argued that the main reason lifting santions is related to help Libya control illegal immigration, the main concern of Itailan goverment is the untouched oil and gas fields of Libya, see: EU agrees to lift Libya sanctions, *BBC,* 22 September 2004, retrived 22 July 2009 from http://news.bbc.co.uk/2/hi/europe/3680686.stm.

for Italy. The early signals of Italian interests on Libya's energy fields emerged when the governments agreed on 'Green Stream' project in 2003. The pipeline was inaugurated on 7 October 2004 by Italian Prime Minister Berlusconi and Libyan President Muammar Gaddafi. The 540 km long pipeline has an annual capacity of 11 bcm of natural gas and had a cost of 4.6 billion Euros.[224] Moreover, national oil company of Libya (NOC) and ENI had already agreed on future energy development plans particularly in Western Libya Gas Project In 2007, ENI signed a strategic agreement with Libya which strengthened its already dominant position in the country and paved the way for increased production of oil and gas in that country. ENI's activities in Libya targets both oil and gas production in Libya's untouched reserves.[225] Moreover, the relations between Italy and Libya have tightened after Italy expressed deep sorrow and apologies for the abuses during the colonial era and accepted to pay repercussions totaled to 4.5 GBP in 2008. The rapprochement between Libya and Italy has further developed after the official visit of Colonel Gaddafi to Rome in June 2009.[226] In addition to the pipelines, Italy also tries to diversify gas suppliers by LNG imports. However, LNG imports constitute a very small part of total gas imports of Italy. Interestingly, Italy has only one LNG regasification terminal in Panigaglia. Algerian LNG dominated the LNG market in Italy with an annual flow of 3 bcm. Although Nigeria and Egypt exported Italy 4 and 1 bcm of LNG respectively in 2004, their gas trade has shifted to France after 2005.[227] This shift is clearly indicates how delicate are the balances among member states when main energy supplies are at stake. Therefore, a potential cooperation field, in that sense, may easily turn into a rivalry between two member states.

Similar to the cases in oil and gas market, Italy imports almost all the necessary coal for its economy. In more concrete terms, the total necessary coal for the economy is about 25 million tons of coal whereas only 0.1 million tons of this amount is produced by domestic

[224] Libya-Italy Pipeline Gas sold out, 2005, *Enterpreneur,* 18 July 2005, retrieved 22 July 2009 from http://www.entrepreneur.com/tradejournals/article/134094667.html.
[225] Italian company extends oil, gas contracts with Libya, 2008, *BBC Monitoring European,* 20 June 2008, retrieved 23 July 2009 from http://proquest.umi.com/pqdlink?Ver=1&Exp=12-21-2014&FMT=7&DID=1497754301&RQT=309.
[226] Day, Michael, 2009, "Colonial sins are forgiven as Gaddafi pitches his tent in Italy", *The Independent,* 10 June 2009, retrieved 24 June 2009 from http://www.independent.co.uk/news/world/europe/colonial-sins-are-forgiven-as-gaddafi-pitches-his-tent-in-italy-1701108.html.
[227] European Gas Market, 2008, op-cit.

resources. From this point of view, Italy is a completely coal dependent country. The primary suppliers of coal are South Africa (20 percent), Colombia (13 percent) and Australia (12 percent).[228] Italy also imports coal from some other countries such as China, the US, Indonesia and Poland. Among all, it is clear that Italy has already achieved a certain degree of diversification as far as coal supply is concerned. Moreover, most of the supplies come from remote coal sources, which provide somehow an advantage to Italy. In that sense, Italy is not dependent on a regional actor.

2.4.3.3. Italian Government's Policies towards Energy Security

Italian foreign policy has increasingly become more assertive in the recent years due to three main factors: (1) poor domestic energy reserves, (2) increasing energy demand, and (3) international competition for energy security. The activities of officials in government departments consider all these factors in shaping the energy policy of Italy. Therefore, Italy has recently been in a process of reorientation of its energy policy as a part of its foreign policy. When the traditional energy policy of Italy is examined, certain points can be identified as peculiar characteristics of Italian. First of all, Italy is geographically very disadvantageous when compared to other bigger member states. Italy does not have any important oil or gas reserves like the UK has or does not have any coal reserves like Germany has. Secondly, Italy has consciously discredited nuclear energy as a part of its national energy policy. Germany, UK and France have preferred nuclear energy as a part of their energy policy. This is an important disadvantage of the country in a potential race for great power status on a regional basis because having nuclear capability requires high level of investment and time. Thirdly, Italy has traditionally preferred oil in early period of industrialization due to the lack of indigenous coal reserves. With the increasing use of natural gas, some of the generating stations previously used oil or coal have turned into natural gas stations. Therefore, the country is heavily dependent on oil and gas supplies. Finally, Italian government did not pursue a policy of diversification until recently. Most of the oil and gas is provided by a few suppliers. All these characteristics of Italy make the country one of the most fragile EU members as far as energy security considered. Italy is

[228] Global Overview of CMM Opportunities, 2009, *US Environmental Protection Agency,* retrieved 25 June 2009 from http://www.methanetomarkets.org/m2m2009/documents/toolsres_coal_overview_ch16.pdf.

not only disadvantageous among other bigger member states, but also open to the influence of energy suppliers. The government, on the other hand, is well aware of the situation:

> Within the context of growing demand for hydrocarbon fuels, and the stiffening competition for supplying them, Italy is in danger of finding itself at a considerable disadvantage. As a result of its rejection of nuclear power (which is once again under consideration) and of its greatly reduced use of coal to generate electrical energy and still limited development of renewable resources, Italy has gradually shifted to gas and, in proportion to its energy needs, currently uses more gas than any other European country… It has been estimated that by 2025 our country will be importing practically all the raw materials required to satisfy its energy needs.[229]

Being aware of the current situation, Italian Government has made a self-criticism for pursuing individual policies similar to other EU members and contented that EU members should develop a unique energy policy based on certain criteria defined by the Community institutions. The government put forth three main targets of an energy policy, which are: environmental sustainability, supply security and competitiveness.[230] For the first one, environmental aspect of the issue, the government invests in renewable technologies, but also has concerns that their share in energy supply will be very limited. Despite Italian government renounced nuclear energy because of environmental reasons, this option remains to be an alternative for Italy in the future. Secondly, government questions reliability of relying heavily on Russian resources and stresses the importance of diversification for the European countries as a whole. Thirdly, the government tries to improve competitiveness in a market where prices are very high due to excessive dependence on oil and gas. The Italian government argues that opening up of the market since mid-1990s when totally completed would provide competitive and stable prices both for industrial and residential consumers. However, the dominant position of ENI sponsored by the government overshadows the sincerity of this official discourse.

In light of these objectives, Italian government defined three main actions: (1) actions to be implemented at national level, (2) at EU level and (3) at supplier level. The priority areas at national level are diversification of fuel mix, construction of gas transportation and storage facilities, and proper functioning of a competitive energy market. In the first

[229] The situation in Italy, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/EN/Politica_Estera/Temi_Globali/Energia/Situazi_Italiana.htm.
[230] Objectives, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/EN/Politica_Estera/Temi_Globali/Energia/.

priority area, the policy makers stress the importance of developing renewable technologies as well as introducing energy efficiency measures. However, the main argument of the government is to discuss nuclear energy which is currently banned in Italy. The second priority area to be implemented at national level is to develop infrastructure for natural gas. As the leading natural gas consumer of Europe, the government obviously points at the requirement for new pipelines, storage facilities and LNG regasification terminals. As for the third priority area, the Italian policy makers contented that liberalization of energy markets are very important. Even more, they argue that gas market liberalization should be open to international level since the sources of gas are not limited by the EU borders.

As for the actions to be implemented at the Union level, Italian government criticizes all member states for their individualistic behavior. Italy perceives energy as an issue that should be dealt with at the Union level. According to the government officials, the issues from liberalization timetable to energy infrastructure planning could be better coordinated at the EU institutions.

The final action area of the Italian government for conducting energy politics is the supplier level. Since a unique policy cannot be achieved by the member states, according to Italian policy makers, their county should deal personally with its current problems. The government's statement is very clear on providing energy security:

> …where energy supplies are concerned no country can allow itself the luxury of waiting for the European Union to achieve the objectives it has set itself… While gas consumption is growing steadily in our country and in the rest of Europe, the monopolist Gazprom is investing enormous resources purchasing assets abroad in order to enter the markets of Western Europe. This combination of growing Russian and European demand, new opportunities in the Chinese market and the age and shortcomings of the Russian facilities, creates a very real risk that in the medium term Russia will no longer be able to honour its existing contracts with its European partners. The countries most at risk from this situation will be those most dependent on imports, such as our own.[231]

When combined with the latest Russian conflict with Ukraine and Belarus, these problems of Russia as a supplier make Italian decision makers more anxious about their

[231] Major Interventions, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/ EN/Politica_Estera/Temi_Globali/Energia/Interventi_Importanti.htm.

supply problem. Russia is the main supplier of Italy and relations with Russia has been clearly planed by the Italian energy authorities. However, heavily relied on Russia and Algeria has brought certain deficits for Italian energy, thus foreign policy. In order to diminish this problem, Italian officials envisage a plan to enhance energy relationship with the countries of southern shores of the Mediterranean. Although it was not overtly mentioned in documents, Italians pointed Libya by this explanation. The current agreements and high level visits clearly affirm this situation. Furthermore, what clearly labeled in foreign policy documents of Italy is the role of Turkey and the Iranian and Caspian resources. This shows that Italy is urgently in need of diversification. Since they do clearly explain the risk of Russian gas, they will probably be one of the most committed defenders of Turkey's transit role.

2.4.4. Energy Policies of the United Kingdom

Last but not least the energy policies of the UK should be evaluated as one of the potential European great powers in a multi-polar structure. When compared with other European powers, the energy mix of the UK depicts a more even distribution between different types of fuels. The most prominent difference of UK from other states have been its production capacity. Even until recently, the UK was one of the few self sufficient countries of the EU as far as energy consumption is considered. However, depletion of domestic reserves as well as increasing demand has turned UK to become a net energy importer. However, they are still the least energy dependent EU member among the other potential great powers. A brief explanation of the energy profile of UK would help to clarify British expectations on energy policy and their impact on energy decision making. Table 2.8 on the next page provides a general outlook for UK energy demand-supply structure.

2.4.4.1 Energy Demand in the United Kingdom

The United Kingdom is the third in Europe after Germany and France as far as energy consumption is considered. The total energy supply in UK is 231 million toe which is almost equal to 2,5 percent of world energy demand. Interestingly, the UK exports large amounts of energy resources to other countries. Therefore, after a foreign trade balance

analysis, UK has a capacity to satisfy the 80 percent of the domestic energy demand by own resources. UK energy market depicts a more evenly distributed fuel dependency which provides the country leverage in energy diversification. In other words, with the current structure of fuel type, UK has already achieved certain degree of diversification recommended by the European Commission. As almost relevant in all other countries, oil has a dominant position among other fuel types. The demand for oil is about 38 percent of total demand whereas gas demand is almost 35 percent. Coal and nuclear power follows these two with shares of 18 and 9 percent respectively. Other energy resources such as combustible renewable, hydro or solar energies do not have a high demand in the UK.

The United Kingdom has long been active on the global oil market particularly after Winston Churchill had convinced the government to switch the Royal Navy from coal to oil in early 1900s.[232] Mostly thanks to the North Sea oil fields[233], the UK has been one of the main oil produces together with Norway. However, after the peak point of production in 1999, UK's oil production depicted a declining graph.[234] It is estimated that almost 70 percent of North Sea reserves had already been recovered by the end of 2006 and the production is expected to fall to one-third of 1999 figures by the end of 2020.[235] Whatever the underlying cause of depletion, the indigenous oil reserves in the UK are decreasing. Parallel to this trend, demand for oil shows a very slow change. In contrary to the demand in oil, the share of natural gas is continuously increasing as in all other European countries. Although there was a short period of decline in gas demand due to global economic crisis,[236] a strong upwards trend for a mid-term period is expected in UK's gas demand.[237]

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[232] The actual purpose of Churchill was not merely control the world oil market at that time. Warships functioning with oil could gather way with higher speed and had a more manevour capacity when compared to the warships functioning with coal. However, his decision to switch the Royal Navy to oil brought a real pressure on UK government to search for secure oil fields. For more details, see: Yergin, Daniel, 1991, The Prize: The Epic Quest for Oil, Money, and Power. New York: Simon & Schuster

[233] This area covers the Atlantic Margin of the UK which includes the west of Shetland.

[234] Zittel, Werner, "Analysis of the UK oil production", 2009, retrieved 18 August 2009 from http://www.peakoil.net/Publications/06_Analysis_of_UK_oil_production.pdf.

[235] Bowers, Simon, 2010, "North Sea oil 'could last at least a decade'", *The Guardian,* 24 February 2010, retrived on 12 March 2010 from http://www.guardian.co.uk/business/2010/feb/24/plenty-of-north-sea-oil.

[236] UK gas demand falls as recession bites, 2009, *Reuters,* 17 February 2009 from http://www.reuters.com/article/ idUSLH01543920090217.

[237] UK gas demand is forecast to rise from 91 bcm to 100 bcm, 2009, *PRinside,* 12 November 2009 from http://www.pr-inside.com/uk-gas-demand-is-forecast-to-r1579998.htm.

Table 2.8. Energy Balance for the United Kingdom

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	10679	80010	0	71987	19663	396	401	3487	0	0	186623
Imports	31655	61465	27278	18879	0	0	0	0	884	0	140640
Exports	-445	-52222	-29184	-9329	0	0	0	-68	-238	0	-91485
International Marine Bunkers	0	0	-2308	0	0	0	0	0	0	0	-2308
Stock Changes	-601	-376	-860	-498	0	0	0	-10	0	0	-2344
Total Primary Energy Supply	**41288**	**88877**	**-5073**	**81039**	**19663**	**396**	**401**	**3888**	**646**	**0**	**231126**
Transfers	0	-2704	3035	0	0	0	0	0	0	0	331
Statistical Differences	-155	-88	-50	-26	0	0	0	1	0	0	-318
Electricity Plants	-34738	0	-585	-20476	-19663	-396	-364	-2860	31653	0	-47430
CHP Plants	-239	0	-358	-3535	0	0	0	-360	2272	0	-2220
Heat Plants	-315	0	-57	-1715	0	0	0	0	0	1347	-740
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-86253	84608	0	0	0	0	0	0	0	-1646
Coal Transform.	-2123	0	-196	0	0	0	0	0	0	0	-2319
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transform.	4	167	-191	-4	0	0	0	0	0	0	-23
Own Use	-828	0	-4784	-6222	0	0	0	0	-2426	-72	-14331
Distribution Losses	-173	0	0	-860	0	0	0	0	-2666	0	-3699
Total Final Consumption	**2721**	**0**	**76350**	**48201**	**0**	**0**	**37**	**669**	**29479**	**1275**	**158731**
Industry sector	**2178**	**0**	**6963**	**11122**	**0**	**0**	**0**	**126**	**10002**	**836**	**31228**
Transport sector	**0**	**0**	**55062**	**0**	**0**	**0**	**0**	**209**	**733**	**0**	**56004**
Other sectors	**543**	**0**	**4450**	**36344**	**0**	**0**	**37**	**333**	**18744**	**438**	**60889**
Residential	528	0	3026	28203	0	0	0	187	10015	52	42012
Commercial and Public Services	9	0	823	6431	0	0	0	77	8374	386	16101
Agriculture / Forestry	3	0	285	156	0	0	0	60	355	0	859
Fishing	0	0	0	0	0	0	0	0	0	0	0
Non-Specified	3	0	316	1553	0	0	37	8	0	0	1917

* in thousand tons of oil equivalent (ktoe) on a net calorific value basis.

Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=GB.

In late 1970s, discoveries of new gas fields in the North Sea complemented by the Conservative privatization of oil, coal and electricity generation in 1980s. The increasing demand for gas has begun in that period when privatized power companies made a "dash for gas".[238] Today, although there is a trend of depletion in North Sea gas reserves similar to depletion of oil reserves, new field developments and revisions in established fields increases the potential indigenous gas reserves in UK. [239] However, the increase in potential reserves could not compensate the increasing demand and could not prevent UK to become a net natural gas importer in the recent years. The use of other fuel types is also increasing. For example, despite the opposite demand structure of other Western European Countries, the coal demand in UK reached to a historical high level in 2006.[240] However, the amount of imported coal is three times higher than domestic production.

Moreover, the most of the existing coal mines were closed down in recent years. The technology of generators operated by coal is also old-fashioned.[241] Therefore, the increase in demand of coal is not a promising solution to the question of energy in the UK. However, the debate on nuclear power may be an alternative solution to the problems associated with UK's increasing energy dependence. The existing nuclear power stations provide less than 10 percent of the TPES in the UK. However, it is important because almost 20 percent of the electricity generation is provided by the 24 nuclear reactors dispersed around the UK. Despite the aggressive struggle of Greenpeace and refusal of nuclear energy by the Scottish government, the energy policy makers in the UK are highly committed to the idea of building new nuclear plants in order to compensate the decreasing efficiency of older nuclear reactors.[242]

A sectoral analysis of demand for energy in UK is also worth to consider in order to understand the motives under British energy policy making process. First of all,

[238] Wheeler, Brian, 2004, "The politics of power", *BBC,* 22 April 2004, retrieved 8 August 2009 from http://www.energybulletin.net/node/105.
[239] UK Gas Reserves and Estimated Ultimate Recovery 2009, 2009, *Department of Energy and Climate Change,* retrieved 9 August 2009 from https://www.og.decc.gov.uk/information/bb_updates/chapters/Table4_4.htm.
[240] Boom not enough to re-open UK coal pits, 2007, *The Financial Express,* 21 June 2007, retrieved 5 August 2009 from http://www.financialexpress.com/news/boom-not-enough-to-reopen-uk-coal-pits/202224.
[241] Rohrer, Finlo, 2004, "Can Britain go back to coal?", *BBC*, 18 October 2004, retrieved 18 August 2009 from http://www.energybulletin.net/node/2706.
[242] New nuclear plants get go-ahead, 2008, *BBC,* 10 January 2008, retrieved 22 August 2009 from http://news.bbc.co.uk/2/hi/uk_news/politics/7179579.stm.

transportation sector leads in energy consumption in the UK with a share of 35 percent of TPES. As it is shown in Table 2.8, transportation sector solely uses oil and it correspondts to more than 72 percent of the total oil consumed in the UK. Therefore, use of more efficient hybrid cars or public transportation based on other electricity may decrease dependency on oil. Secondly, because of its climate, a high proportion of energy is used for purposes of heating. A total of 34 percent of TPES is used by residential and other sectors for heating purposes. The rest of the energy is used by industrial sectors. Most of the energy used by industrial sector, residential and other sectors are mainly supplied by natural gas plants as well as coal generators and nuclear power plants. To sum up, the increasing gas demand is an obvious fact for UK's energy strategy. Since the domestic resources are limited, the British energy policy makers should find ways to secure gas supply in the near future. Therefore, it would be helpful to analyze the energy suppliers of the UK. [243]

2.4.4.2. Energy Suppliers of the United Kingdom

The United Kingdom has a more advantageous position when compared to other European great powers in terms of fuel type diversification. Although the use of oil and gas is more than other type of fuels, coal and nuclear resources are listed in the energy mix as well. To begin with natural gas, it is fair to say that there will be a growing import requirement in the years ahead. Although the indigenous reserves in the UK continental shelf may be promising, the current level of production is decreasing, which in turn will require to search for external resources in order to satisfy the existing demand structure. Currently, Great Britain imports natural gas from Norway and continental Europe via pipelines and LNG from other resources. Vesterled, Langeled and Tampen Link pipelines provides Norwegian gas to UK, which accounts for around 25 percent of the total gas imports of the country. However, further developments in upstream sector in Norway are promising for UK gas market. The inauguration of the Norwegian Ormen Lange field is expected to meet 20 percent of UK's future gas requirements for the next 30-40 years.[244]

[243] For a detailed analysis of UK energy consumption, see: Energy Consumption in the United Kingdom, *Energy Publications,* London: Department of Trade and Industry, retrieved on 20 May 2009 from: http://www.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx.
[244] Norway increases EU's security of gas supplies, 2009, *Norway Mission to the EU,* retrieved 20 August 2009 from http://www.eu-norway.org/news/security_of_gas_supplies/.

On the other land, UK-Belgium interconnector with a capacity of 25 bcm natural gas helps UK to connect mainland European gas network. By this way, UK not only has the ability to export natural gas to Europe, but also has a chance to provide natural gas in cases of excessive gas demand.[245] In addition to pipelines, UK has recently agreed with Sonatrach, Algeria's energy company, for LNG deliveries. For this purpose, UK expanded its terminal facilities in order to increase the LNG trade. The capacity of Isle of Grain, the UK's oldest LNG import terminal, has been increased to 9.8 million metric tons of LNG a year. [246] The Grain terminal currently receives LNG from Algeria. In addition, two more LNG terminals, South Hook and Dragon in Milford Haven have been inaugurated in the recent years. These two terminals are currently the import points for the Qatar gas and have a capacity to provide 25 percent of the UK gas demand. [247]

Similar to gas, UK has long been a self-sufficient country as far as oil is considered. However, UK's North Sea oil is also depleting and refiners search for new external resources.[248] Primary oil supplier of the UK is Norway. Russia, Algeria and Middle Eastern oil have shares less than 10 percent each in UK's oil imports. [249] However, the level of oil dependence of the UK is very low and the main purpose of current oil imports is to blend crude oils imported and produced in UK in order to get most efficient fuel type to use in plant. On the other hand, UK is much more dependent in terms of coal imports. Almost three-quarters of UK's coal are provided from external resources. Russian coal has dominated the British coal market. South Africa is also an important coal supplier of

[245] The Future of UK Gas Supplies, 2004, *Parliamentary Office of Science and Technology Postnote No: 230,* October 2004.
[246] LNG Sales, 2009, *Enterpreneur, 23* February 2005, retrieved 22 August 2009 from http://www.entrepreneur.com/tradejournals/article/194674171.html.
[247] For new LNG import ports of the UK, see: First liquid gas delivery in port, 2009, *BBC,* retrieved on 22 August 2009 from http://news.bbc.co.uk/2/hi/uk_news/wales/south_west/7952415.stm; Liquified Natural Gas, *South Hook LNG Company Ltd.*, retrieved on 22 August 2009 from http://www.southhooklng.co.uk/cds-web/view.do?id=1083.
[248] Energy Markets Outlook, 2007, *Department for Business, Enterprise & Regulatory Reform, Pub 8629/0.5k/ 10/07/NP URN 07/P28*, pp.79-81
[249] Renewable Energy Policy Review United Kingdom, 2004, *European Renewable Energy Council,* retrieved 22 August 2009 from http://www.erec.org/fileadmin/erec_docs/Projcet_Documents/RES_in_ EU_and_CC/United_ Kingdom.pdf, pp. 3.

UK.[250] Australia, Colombia and Indonesia are also among the countries that provide coal to UK energy markets.

2.4.4.3. The British Government's Policies towards Energy Security

The UK's declared energy policy is clearly summarized in a white paper issued in May 2007 by the Department of Trade and Industry.[251] The name given to the white paper (Meeting the Energy Challenge) already deciphers the anxiety of British government about providing energy resources in the near future. This paper is important because it is the most recent document that examines the priorities of British energy strategy and defines a clear path for the UK in various field of energy. Therefore, examining this document may help to clarify British Government's policies towards energy security. The white paper mainly defines two long-term objectives for the well-being of the British economy and public-health: (1) reducing carbon emissions and (2) ensuring clean, secure and affordable energy sources. As for the former, the government refers to various other documents issued by international institutions about the environmental challenges of climate change and stressed the importance of a collective global effort for an ultimate solution. As a part of a global strategy, the British government mentions two main strategies to cope with this situation. First one is to save energy and second one is to develop cleaner energy supplies. The government put clear schemes and determined targets to save energy in business, households, transport, and public sectors.[252] As for the cleaner energy supplies, the government takes particular attention on renewable and more efficient heating and power generating systems which could provide energy efficiency as well as lower carbon emissions.[253] In addition, a special part is devoted to the significance of nuclear power for UK's energy supply diversification. According to the government, there are advantages and disadvantages of nuclear power and further argued that meeting carbon emission reduction goal by excluding nuclear power as an option would be more expensive. Thus, the British Government concludes that it is in public interest to allow private sector

[250] Severn Barrage Costing Follow-On Analysis to The Renewable Energy Forum Ltd, 2008, *IPA Energy,* retrieved 22 August 2009 from http://www.ref.org.uk/Files/ipa.for.ref.severn.barrage.study.2.pdf, p. 41.
[251] Meeting the Energy Challange: A Whitepaper on Energy, May 2007, *HM Government Department of Trade and Industry.*
[252] *Ibid.,* pp.48-76.
[253] *Ibid.,* pp.83-105.

companies the option of investing in new nuclear power stations.[254] The second long-term objective of the British government is ensuring clean and secure energy sources with affordable prices. Government of the UK defines two probable challenges. First one is about UK's increasing reliance on imports in a world of increasing energy demands. Second one is the requirement for private sector investment in energy infrastructure within the UK. To overcome this problem, British Government outlined several significant points. Firstly, the domestic reserves should be produced in the most efficient way. This includes strategies to maximize economic production of domestic coal reserves as well as offshore oil and gas production. In addition to this, the government confirms the necessity of providing a legal framework which promotes investment in energy infrastructure by private companies. According to the government, these steps should be coupled with an international effort. At the European level, an open European energy market should be functioning properly. Beyond the EU, on the other hand, the member state governments should work for more transparency by using bilateral relations or international organizations such as International Energy Agency.[255]

To sum up, the British government declares a dual strategy against the challenges of energy security. First pillar of this strategy aims to control the increasing energy demand energy saving methods. Secondly, the government works on different policies to provide security of supply. Since the late 1960s, North Sea energy has contributed over 200 billion pounds to the British economy.[256] The depletion of reserves in those fields enforces the Government of UK to find alternative resources. UK's historical presence in energy politics may facilitate bilateral relations with producers. However, UK needs more than an individual effort in order to fulfill its objectives defined in the energy white paper. A collective European action, for example, is necessary to tackle the problems associated with climate change and to form a liberalized energy market.

[254] *Ibid.*, pp. 180-216.
[255] *Ibid.,* pp. 19-21.
[256] UK faces future without North Sea oil, 2004, *Reuters*, 14 January 2004, retrieved 18 August 2009 from http://www.energybulletin.net/node/105.

CHAPTER III

TURKEY IN THE NEW ENERGY ENVIRONMENT

3.1. Overview of Turkey's Energy Security

The previous chapter has already gone over the policies and activities that European Union and some member states implement for a more secure energy supply. Generally speaking, the foreign policy issues of an international actor may be evaluated from two different perspectives. The first perspective is the policies written on documents while the second one is about the actual facts and activities of that specific actor. The former one is composed of declarations or agreements issued by government officials or leaders. The latter one, on the other hand, is composed of the de facto activities that international actor engages in implementing foreign policy. These two perspectives of foreign policy are not mutually exclusive. For example the activities of a state's foreign policy may completely be in line with its foreign policy doctrine. On the other hand, these two perspectives may be completely different. For example, despite defending peace in all written documents, an international actor may try to use force under certain conditions. Therefore, what is written in documents should not necessarily show an actor's actual foreign policy priorities. Vice-versa is also relevant. What is written in the foreign policy papers of an actor cannot be regarded as the limits of activity for that actor.

It is clear from both policy perspectives mentioned above –written documents explaining the energy policies and de facto activities of member states for providing energy security– that alternative ways for receiving energy resources are critically

important for the EU. As an incumbent transit country[257], Turkey may be one of the best alternatives for the Union's diversification question. Turkey is geographically located between energy demanding European countries and energy rich suppliers. Therefore, among the energy policy circles both in Turkey and in Europe, Turkey's role in providing energy to the EU member states is beyond debate.

The main questions are different: Whether the energy provided by Turkey to the pipelines will be secure or not, and whether Turkey will have a role of a transit country or an exporting country are the main questions which will probably dominate the future developments in energy security issues between Turkey and the European countries. The details and prospects for the future will be discussed in the following chapter. Therefore, Turkey's energy policies should be clearly examined as well as the current Turkish position in energy issues.

In this chapter, the energy outlook of Turkey is examined in detail. The demand and supply figures as well as Turkey's own energy resources will be evaluated. Because much of the discussion is centered on 'Turkey's role as an energy hub', this chapter also includes a subsection which examines energy rich neighboring states. At the end of this chapter, the findings will help us to understand how the Turkish energy demand and supply figures will develop and how Turkey would contribute to the energy question of the European Union members.

3.2. The Energy Outlook of Turkey

Similar to the previous chapter, which examined the energy outlook of European Union at the member state basis, the energy outlook of Turkey will be better analyzed by starting with demand and supply figures. As it is examined in detail below, the energy consumption

[257] Currently Turkey sends natural gas to Greece via Turkey-Greece interconnector pipeline which was inaugrated in November 2007. Several months before that, the EU Commission approved declared its support for the Greece-Italy pipeline which will pave the way to transfer natural gas from Turkey to Italy via Turkey-Greece pipeline.

Table 3.1. Energy Balance for Turkey*

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	13085	2134	0	745	0	3805	1392	5170	0	0	26330
Imports	13580	23892	13071	25171	0	0	0		49	0	75764
Exports	0	0	-6557	0	0	0	0	0	-192	0	-6750
International Marine Bunkers	0	0	-971	0	0	0	0	0	0	0	-971
Stock Changes	-217	303	-508	49	0	0	0	0	0	0	-374
Total Primary Energy Supply	**26448**	**26329**	**5034**	**25965**	**0**	**3805**	**1392**	**5170**	**-143**	**0**	**93999**
Transfers	0	0	0	0	0	0	0	0	0	0	0
Statistical Differences	21	-85	-16	0	0	0	0	0	0	0	-80
Electricity Plants	-11132	0	-836	-11609	0	-3805	-92	-36	14498	0	-13011
CHP Plants	-185	0	-208	-1680	0	0	0	-7	663	958	-459
Heat Plants	0	0	0	0	0	0	0	0	0	0	0
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-26314	26349	0	0	0	0	0	0	0	35
Coal Transf.	-2144	0	0	0	0	0	0	0	0	0	-2144
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transf.	0	71	-73	0	0	0	0	0	0	0	-2
Own Use	-296	0	-1573	-105	0	0	0	0	-725	0	-2698
Distribution Losses	-32	0	0	-21	0	0	0	0	-2134	0	-2187
Total Final Consumption	**12680**	**0**	**28676**	**12551**	**0**	**0**	**1300**	**5127**	**12160**	**958**	**73453**
Industry sector	**10192**	**0**	**3115**	**3338**	**0**	**0**	**121**	**0**	**5707**	**958**	**23432**
Transport sector	**0**	**0**	**14805**	**116**	**0**	**0**	**0**	**2**	**68**	**0**	**14990**
Other sectors	**2488**	**0**	**5113**	**8966**	**0**	**0**	**1179**	**5125**	**6386**	**0**	**29255**
Residential	2488	0	1956	6181	0	0	1179	5125	2964	0	19892
Commercial and Public Services	0	0	0	2784	0	0	0	0	3040	0	5824
Agriculture / Forestry	0	0	3157	0	0	0	0	0	368	0	3526
Fishing	0	0	0	0	0	0	0	0	13	0	13
Non-Specified	0	0	0	0	0	0	0	0	0	0	0

* in thousand tonnes of oil equivalent (ktoe) on a net calorific value basis.

Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=TR.

and supply figures in Turkey has experienced a great change in the last two decades. With the rapid development of the economy and the increase in population, Turkey's energy requirements increased as well. In order to meet the increasing demand, Turkish policy makers engaged in a policy to develop relations with neighboring energy producers. The Iran-Turkey pipeline in 1996 and the Blue Stream pipeline between Turkey and Russia in 1997 are all the consequences of this policy. There are certain shortfalls in forming a supply and demand balance due to several reasons, such as insufficient storage capacity or seasonal divergence in consumption trend. However, the increasing energy consumption within Turkey naturally contributes to its role in European energy supply since it requires Turkey to develop its energy facilities and infrastructure as well as its relations with suppliers.

3.2.1. Energy Demand in Turkey

The energy demand of Turkey is far below than the leading EU Member States. The total energy consumption in Turkey is slightly above a quarter of the total German energy consumption and only equals to 42 percent of French annual energy consumption. This is, of course, depends on the difference between economic development levels of these countries as well as the sociological differences between these countries such as use of high standard public services or private cars. Whatever the underlying reason is, Turkey needs less energy resources when compared to Germany, France, Italy or the UK.

As the table 3.1 shows, Turkey needs nearly 75 million toe of energy resources. Among others, oil and petroleum products have the greatest share of Turkey's energy consumption figure. In more concrete terms, slightly less than one-third of the total energy consumption is provided by oil products. Approximately 70 percent of this amount is imported in the form of crude oil, whereas rest of that amount is composed of other petroleum products.

Oil is followed by natural gas and coal; each has a share of approximately 27 percent in total energy consumption. Half of the coal is provided by the indigenous resources of the country whereas almost all of the natural gas is imported from outer sources. A considerable part of both coal and natural gas is used in electricity plants. In other words, 40 percent of the coal and natural gas is used in order to generate necessary electricity

power for the national economy. While the consumption of coal follows a stable growth path, natural gas consumption in Turkish market grows at an enormous level for the last decade. The coal production in Turkey has grown from 25 million tones in 2004 to 34 million tones in 2009, which shows a 36 percent increase in a five years period.[258] However, the increase in use of natural gas is much more than in coal. In 1998, the use of natural gas in Turkish market was limited with 10 billion cubic meters. This amount has grown up to almost 38 billion cubic meters in the year 2008. The level of Turkey's natural gas consumption in 2015 is expected to be 57 billion cubic meters. [259]

Other type of energy resources such as hydro-power, renewable, geo-thermal or solar power constitutes a smaller share in Turkish energy market. The demand for these type of resources have only a total share of slightly more than 10 percent. Although there is an increase in wind-power generation systems recently, Turkey's wind potential is estimated to contribute only 4.2 million toe to the Turkish energy supply.[260] This amount is less than 5 percent of total energy demand. Moreover, the cost of building new wind plants is another challenge against the use of this potential.

A sectoral panorama of the energy demand in Turkey may also be helpful for understanding the structure of the market. The highest share of total energy consumption belongs to industry in Turkey with a share of 40 percent. Another 32 percent of the resources is consumed for residential purposes. The share of transportation is only 18 percent which is considerably below the levels of European countries. The rest is used in other sectors and for agricultural purposes. As the economy has experienced a growth during the mid-2000s, energy consumption level in industrial and transportation sectors have increased by 40 percent and by 20 percent, respectively. This huge increase in a five years period is mostly a consequence of the growth of economy after the economic crisis in 2001. However, it should also be noted that such kind of huge increases in demand may cause problems since it is difficult to find new energy resources.

[258] Kömür Sektör Raporu, 2009*, Türkiye Kömür İşletmeleri Genel Müdürlüğü,* Ankara, p. 15.
[259] 2008 Yılı Sektör Raporu, 2009, *BOTAŞ,* Ankara, p. 9.
[260] Acar, Esin and Ahmet Doğan, 2008, *Potansiyeli ve Çevresel Etkilerin Değerlendirilmesi,* VII. Ulusal Enerji Sempozyumu Değerlendirmesi, pp. 676-8.

Turkish energy supply mix has some similarities and differences when compared to other European Union members. As in the case of EU members, Turkey's energy demand is heavily relied on hydro-carbon resources, most of which are imported from external suppliers. On the other hand, Turkey has no nuclear power generation system at the moment. The construction of a nuclear reactors in Turkey has always been discussed a part of energy policy agenda. However, there is a strong opposition against a nuclear program by different groups in Turkey. In light of the above mentioned demand structure of Turkish energy market, it is quite important to understand the supply mechanisms of this market. It is important because the level of energy dependency and relations with suppliers are not only important for providing its own energy security, but also necessary for increasing Turkey's chance to become a 'bridge or hub' for the energy trade between suppliers and consumers of energy resources.

3.2.2. Energy Supply in Turkey

Energy consumption of an international actor generally depends on its ability to provide the necessary supply. Without the ability to supply the necessary resources, the whole economy of that country may fall into a burden, which would accompanied with great social disasters and even threats to public heath and security. Therefore, providing necessary energy resources is a vitally important task of all statesmen, who search for state survival. Insomuch as an international actor provides energy resources, the power and safety of that state is in secure. From this point of view, as in all other countries, Turkish policy makers have two alternatives for finding a solution to the energy supply problem. First one is to increase the use and efficiency of own resources. Second one is to develop long-term relationships with supplier and transit countries of energy resources.

3.2.2.1. Turkey's Energy Production

In the Turkey's energy mix, coal has a dominant position as far as Turkey's own resources are considered. The current level of coal production in Turkey is 27 million toe which equals to 28,5 percent of the total energy supply of Turkey. Coal has a significant share in Turkey's energy picture not because Turkey is a coal rich country, but because Turkey does not have sufficient amount of any other energy resource. As far as the current

level of coal reserves are considered, Turkey can be figured as a lower-level county in terms of hard coal and middle-level country in terms of lignite.[261] The domestic coal reserves of Turkey for these two type of resources are 1,33 billion tones for hard coal and 10,4 billion tones for lignite.[262] Figure 3.1 shows the map of existing coal field in Turkey. The coal mines are dispersed in many different regions of the country. This wide-spread coal fields, on the other hand, diminishes the economic benefits of the coal reserves. Moreover, only a small part of the coal potential is hard coal, which is located around Zonguldak coal basin.

Map 3.1. Coal Fields in Turkey

Source: Republic of Turkey Ministry of Energy and Natural Resources, http://www.enerji.gov.tr

Despite the fact that more than two billion tones of additional lignite reserves are discovered by the state agency of mineral research and exploration, the current energy

[261] Coal Information and Documents*,* 2009, *Republic of Turkey, Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=komur_EN&bn=511&hn=&nm=40717&id=40729.

[262] Hard coal is also known as antracite and has a high-calorific value. On the other hand, lignite –also known as brown coal– is considered as the lowest rank of coal which has a very low energy density. Lignite is not regarded as an important and efficient energy resource. Because of its low calorific value, it is economically not feasible to transport lignite and it is generally consumed in thermal power plants which are constructed nearby the coal fields. Generally, hard coal provides approximately 27-28 terajules whereas lignite provides only around 15 terajules in kilotonnes. In other words, 100 tones of hard coal equals to 62 toe, while 100 tones of lignite equals only to 40 toe.

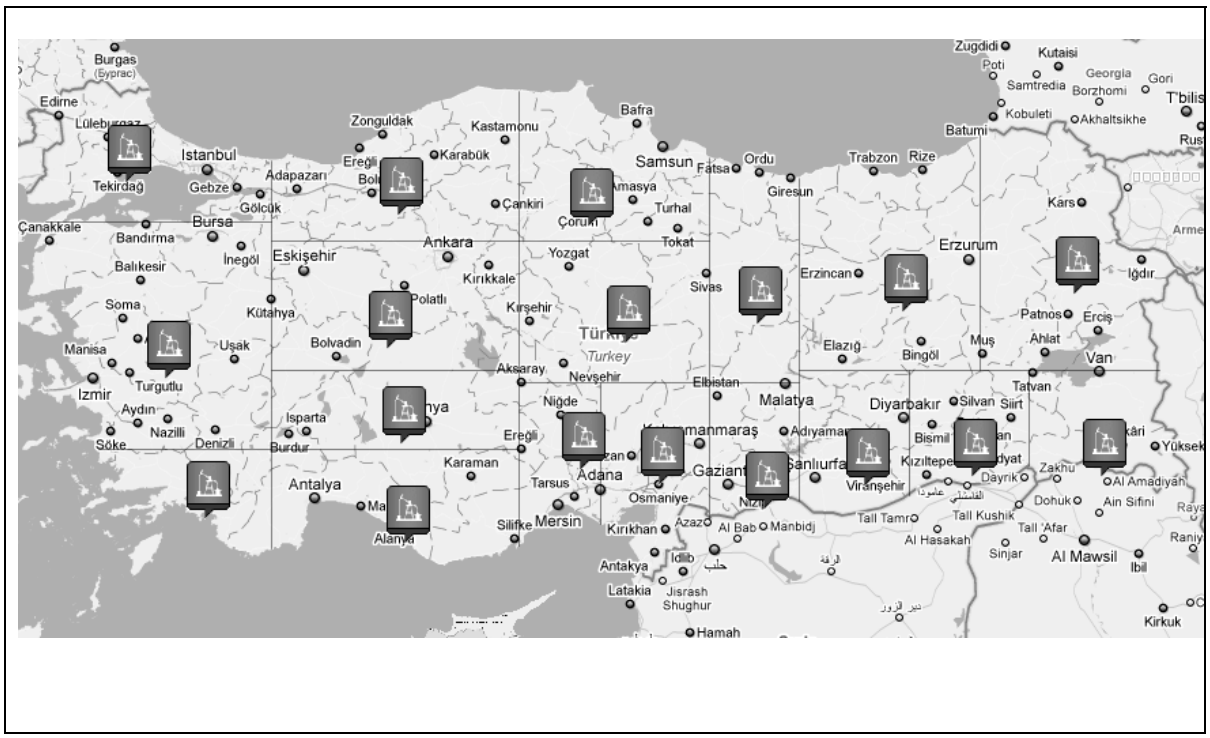
demand cannot be satisfied by the existing fields. Because all hard coal reserves of Turkey equals only to 820 million toe while the lignite reserves only provides 920 million toe of energy supply.[263] In other words, even if there was a mechanism to extract all these coal resources without any production cost, it would only be sufficient for Turkey's energy need for less than 20 years if solely coal is used in energy production. With current production levels, on the other hand, indigenous coal reserves of Turkey last more than 60 years. This means that, Turkey may benefit from indigenous coal resources in order to ease the negative effects of its energy dependency, yet should continuously develop new projects for increasing the level and diversifying the types and routes of external energy resources.

The internal production of other two hydro-carbon resources, oil and natural gas, is comparably very low when compared with coal. There are some specific reasons for the low production rate as far as oil and gas is considered. As it is shown in Figure 3.2, the number of oil or gas development fields is geographically limited. Coal resources are more evenly distributed throughout the world while the oil and gas resources are concentrated on specific regions. Geographical location of Turkey is very close to those oil and gas rich regions but its reserves are not as high as its neighbors. Moreover, the mountainous structure of the Anatolian peninsula brings some difficulty in the process of oil and gas production. In addition, the cost of extracting oil and gas is much more than coal. When all these factors gathered, the low level of oil and gas production in Turkey seems as a natural consequence of several factors.

As it was given in Table 3.1, Turkey's annual oil requirement is about 31 million tons. Turkey's annual production capacity, on the other hand, is limited to 2,2 million tons, which equals to 6,5 percent of the actual oil need. According to TPAO, Turkey's total oil production up to 2008 is 130,7 million tones. Furthermore, the statistics show that there is a sharp decrease in oil production in the last ten years from 2,9 million tons in 1999 to 2,2 million tons in 2008. Furthermore, this level continues for more than 5 years which means that the extraction activities in new fields are not promising although a total of 145 new oil wells drilled in 2008.

[263] Kömür Sektör Raporu, p. 12.

Map 3.2. Oil and Natural Gas Development Fields in Turkey



Source: Republic of Turkey Ministry of Energy and Natural Resources, http://www.enerji.gov.tr

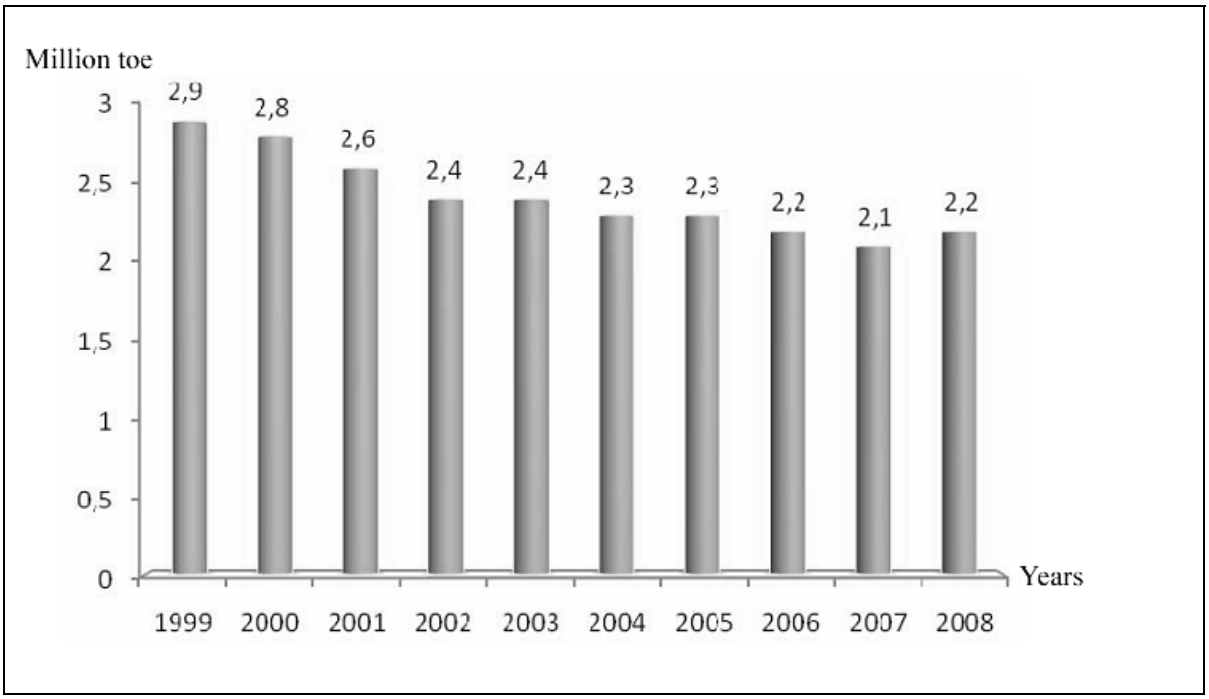
There are two main reasons for the decrease in oil production.[264] Firstly the difficulty in finding new and prosperous oil fields is a big problem. The cost of search is high and production is not guaranteed in all oil search wells. Secondly the aging of existing oil fields is another problem. The capacities of the existing wells are very limited when compared with oil rich regions. Therefore, the period of producing oil from an oil well in Turkey is not so long. In more concrete terms, only 10 percent of the oil fields in Turkey are middle or large scale oil fields. The rest of the fields are small scale. However, different international energy companies have various projects in cooperation with the national oil company TPAO in order to find some new fields in and around Turkey, which includes the off-shore activities on the continental shelf of Turkey.

Natural gas has a shorter history of production in Turkish energy market. The initial natural gas import of Turkey was 15 million m^3 in 1975. Yet, the use of gas in many industries and residential sector as well as Turkish governments' policies in favor of

[264] 2008 Yılı Petrol ve Doğalgaz Sektör Raporu, 2009, *Türkiye Petrolleri Anonim Ortaklığı (TPAO),* Ankara, *p*. 8-9.

natural gas has turned it an indispensable part of the Turkish energy mix. In 2008, the natural gas production of Turkey -for the first time- passed the billion cubic meter mark.

Figure 3.1. Oil Production in Turkey between 1999-2008



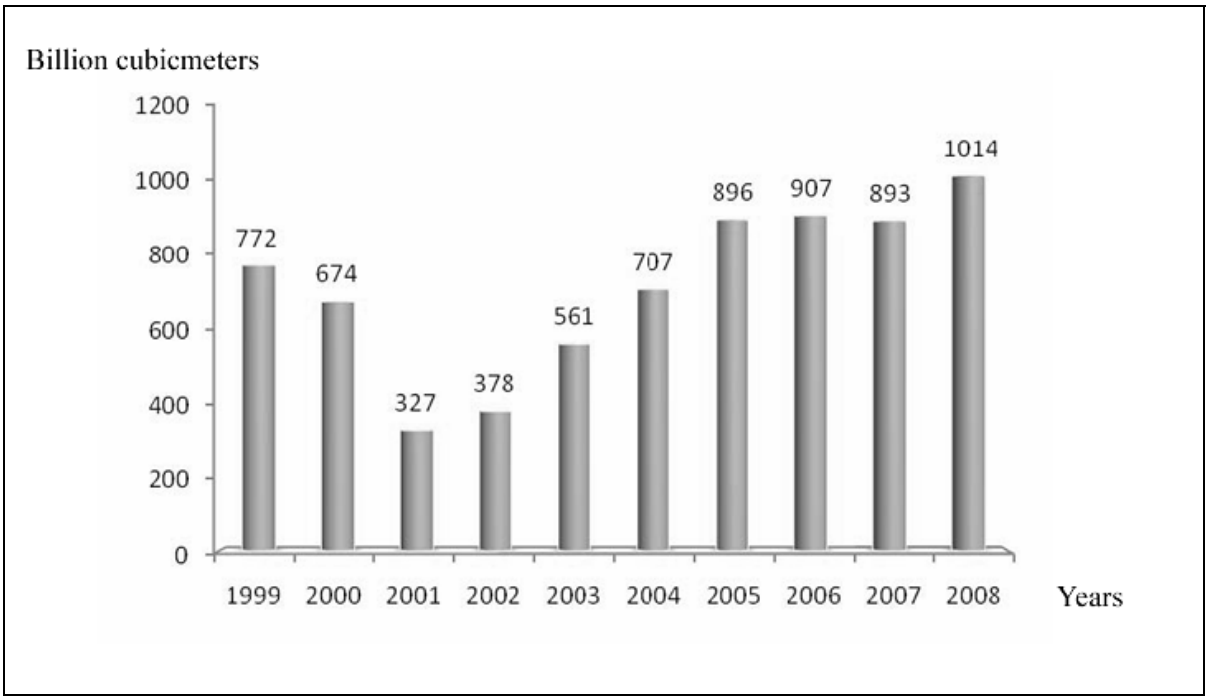
Source: Türkiye Petrolleri Anonim Ortaklığı, *2008 Yılı Petrol ve Doğalgaz Sektör Raporu*

Figure 3.4 depicts the natural gas production in Turkey for the last ten years. Except for a sharp decrease in 2001, the production level has grown steadily. This rapid increase is a consequence of the need for underground storage facilities. Since 1999, there is a high-flow production in the North Marmara and Değirmenköy natural gas fields. These fields have been evacuated in line with the plan for developing new natural gas storage facilities. For this purpose, TPAO and BOTAŞ signed an agreement for storage and reproduction services of the natural gas. As a a total of 1,6 billion m^3 storage capacity will be available in the Marmara Region.[265] Moreover, the recent cooperation between TPAO and Amity Oil for developing new oil and gas fields have also contributed to the increase in Turkish gas production capacity because this cooperation has already achieved to find some efficient new gas fields in Thrace. Despite all the efforts of national and private energy companies, the oil and gas resources of Turkey is limited with the current level of proved reserves.

[265] Ibid.

Unless new technological innovations pave the way for developing new reserves, the current level of Turkey's oil and gas production will probably follow a stable path.

Figure 3.2. Natural Gas Production in Turkey between 1999-2008



Source: Türkiye Petrolleri Anonim Ortaklığı, *2008 Yılı Petrol ve Doğalgaz Sektör Raporu*

Among other energy resources, hydro energy has a considerable contribution to the energy mix. There are 150 hydroelectric power plants (HEPPs) currently operating in different parts of Turkey. The contribution of these HEPPs to the existing energy supply is around 3,8 million toe. In other words, 17 percent of the electricity generated in 2008 is produced by HEPPs.[266] This shows the importance given by Turkey to the hydro energy resources. There are a large number of rivers in Turkey, most of which has a high flow capacity. Therefore, since the mid-1960s numerous dams and associated HEPPs have been constructed in all regions of the country. Among them, Atatürk Dam on the Euphrates River is one of the largest dams of the world. Centerpiece of the more than 20 dams, which all form the multi-sector regional development project of Southeastern Anatolia Project (GAP), Atatürk Dam, has a great contribution to the electricity production in Turkey. However, all these dams and HEPPs built on the rivers of Euphrates and Tigris causes

[266] Hidroelektrik Enerji, 2009, *Devlet Su İşleri Genel Müdürlüğü (DSİ), retrieved* 25 July 2009 from http://www.dsi.gov.tr/hizmet/enerji.htm.

questions over the management of regional watercourse between Turkey and its southern neighbors.

Despite the valuable contribution of HEPPs on Turkey's energy supply, different from other resources, hydro-energy has a disadvantage: Due to the changes in the level of rainfall intensity, the capacity of HEPPs may differ from one year to another. In addition to this, failures, maintenance and repair work and certain policies may decrease the level of energy production by HEPPs.

All other renewable energy resources approximately 7 percent of total energy supply in Turkey. Among those solar energy, wind and geo-thermal are the most efficient types of resources which may contribute to Turkey's energy mix after sufficient quantity of investment is provided. Having a huge potential for solar energy due to its geographical location, Turkey's solar energy potential is calculated as 380 billion kWh/year, which approximately equals to 32 million toe annually. However, unfortunately, Turkey can only use 420 thousand toe of its solar energy potential.267 The utilization of the rest requires a considerable level of investment due to high cost of silicon crystals and thin film technology, which are used in production of solar cells. Technological innovations in solar energy production may suggest lower investment requirements which in turn may allow an increase in the share of solar energy in Turkey's energy mix. Considering the given potential of solar energy in Turkey, even use of only 10 percent of the actual potential would be a great contribution to Turkey's energy question.

Wind power is another renewable type of energy that Turkey has a great potential. Due to its geographic location Turkey is under the influence of different air masses that give rise to potential wind energy generation possibilities in different areas. Especially the Black Sea and Thrace are open the strong winds from the north. Moreover coastal areas of the country have a great wind power potential.[268] According to Professor Uyar from Marmara University "wind power could supply Turkey's energy needs twice over within

[267] Solar Energy, 2009, *Ministry of Energy and Natural Resources,* retrieved 25 June 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=gunes_EN&bn=233&hn=&nm=40717&id=40733.

[268] Durak, Murat and Zekai Şen, *2002,* "Wind Power Potential in Turkey and Akhisar Case Study", *Renewable Energy, 25,* pp. 463-472.

five to ten years if the government had the political will to develop this sector."[269] On the other hand, wind energy atlas of Turkey prepared by the Energy Ministry depicts a total of 53,000 MW of wind power which corresponds to 1.6 million toe of energy resource.[270] Turkey's electricity need is almost ten times higher than this amount. As for the wind energy, Turkey potential is not so clear at the moment. Yet there is a fact that the number of wind farms with huge turbines are rapidly increasing all around the country. As of 2008, the existing contribution of wind power is about 11.1 thousand toe which is not an important level. However, after taking effect of the Renewable Energy Law, licenses were granted to 93 new wind projects which will deliver a total of 3,363 MW equals to 105,000 toe of energy. Another 8,000 MW proposal is awaiting government approval. However, it is not fair to expect a rapid development in wind power generation not only because of the necessary investment, but also geographical impediments such as sudden hills, escarpments and cliffs prevent possible wind generation potential areas.

Turkey has also a great potential of geo-thermal energy resources. Turkey's geo-thermal energy potential is 31,500 MW which equals to one-million toe of energy. Naturally, it is not an impressing figure, but may easily be used in heating, therefore, may cause a decrease in the use of natural gas. However, only 13 percent of the total geo-thermal potential is available at the moment.[271] Another type of energy resource in Turkey is bio-fuels. Various sources from agriculture, forests, animals, organic urban wastes are the bio-mass ingredients of bio-fuels. Currently, Turkey's potential of biomass energy sources are estimated as 8.2 million toe. Approximately, 6 million toe of this amount is already used for traditional heating purposes and in the form of biodiesel. Yet, there is a potential of producing 2.2 million more biomass products. If this potential can be achieved in form of biodiesel, it equals to approximately 13 percent of the total diesel consumed annually in

[269] Daly, John C.K, 2008, "Analysis: Turkey Embraces Wind Power", *Energy Daily*, retrieved 25 July 2009 from http://www.energy-daily.com/reports/Analysis_Turkey_embraces_wind_power_999.html.
[270] Wind, 2009, *Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=ruzgar_EN&bn=231&hn=&nm=40717&id=40734.
[271] Geo-thermal*, 2009, Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=jeotermal_EN&bn=234&hn=&nm=40717&id=40735.

Turkey. However, there are several problems against improving this figure such as lack of sufficient research on this area or non-existence of a law on biomass production.[272]

Besides from these resources, projects for introducing nuclear energy and hydrogen energy into to the Turkish energy market has been discussing for many years. The use of hydrogen energy in public transportation projects are in the agenda of both the government and local authority in Istanbul[273]. The most prominent impediment against projects of hydrogen energy is the cost issue. Although it is completely perfect from an environmentalist perspective, the cost of hydrogen energy is three times higher than traditional hydro-carbon resources. As in all other parts of the world, the proliferation of hydrogen-used facilities in Turkey completely depends on the development of cost-effective hydrogen production techniques.[274] However the situation in nuclear energy is completely different. Although the high costs of construction and operation of nuclear power plants, their use in energy production has always been on the agenda. However, there are serious critiques among different groups. The main concern for the nuclear power is the problem of the disposal of radioactive wastes. Accidents in nuclear site are another risk associated with nuclear power plants. There are certain technological innovations in nuclear energy. However, some former incidents such as Three Mile Island accident in United States and Chernobyl disaster in Soviet Union have still negative effects on people against the nuclear energy.

3.2.2.2. Turkey's Energy Imports

As in most European countries, Turkey is not a self-sufficient country in terms of energy and resource imports of the country almost three-times higher than its own production. Among other resources, oil and its derivatives constitutes the highest share of energy imports. As Table 3.1 depicts, oil is followed by natural gas and coal. The share of gas has increased in the recent years due to the increasing use of natural gas in domestic

[272] Korucu, Yusuf, 2009, *Biyoyatıklar,* retrieved 28 July 2009 from http://www.the-atc.org/events/cleanenergy/pdf/WednesdayBallroom1/Korucu Yusuf_2008CleanEnergy.pdf.
[273]Büyükşehir'den Türkiye'nin ilk 'hidrojen yakıt pili' uygulaması..., 2009, *İstanbul Büyükşehir Belediyesi, retrieved 28 July 2009 from* http://www.ibb.gov.tr/tr-TR/Pages/Haber.aspx?NewsID=17200.
[274] Hydrogen Energy, 2009, *Ministry of Energy and Natural Resources,* retrieved 28 July 2009 from *http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=hidrojenenerjisi_EN&bn=225&hn=&nm=40717&id=40739.*

grid for heating as well as government's policy of increasing supply in order to become an energy hub. On the other hand, the share of imported coal is declining due to the increase in national coal production as a result of proliferation in the number of domestic coal mines.

3.2.2.2.1. Imports of Crude Oil and Petroleum Products

Crude oil and petroleum products constitute almost half of total energy resource imports of Turkey. Moreover, 93 percent of the total necessary oil for Turkey's economy is also imported from foreign sources. In light of these figures, Turkey's oil import policy has gained considerable attention. Turkey's main oil suppliers can be divided into three regional categories: (1) Middle Eastern, (2) North African and (3) Former Soviet Union. Among the first group, Saudi Arabia, Iran, Iraq and Syria are the primary energy suppliers. Libya, Egypt and Algeria supply North African oil to Turkey. Finally, the third group of oil suppliers is formed by the Russian Federation and Azerbaijan. Considering the current investment of Turkish TPAO in Azerbaijan and Kazakhstan, the level of oil imports from these two former Soviet Republics will going to increase in the near future. However, Russia has a dominant role in Turkey's oil market and its share continuously increases. Today, more than 30 percent of imported oil in Turkey comes from Russian Federation.[275] In other words, Russia oil export is around 8-9 billion USD which equals to 35 percent of total foreign trade between Turkey and Russia.[276] Iran, on the other hand, is the main competitor of Russian Federation as an oil supplier of Turkey. Iran retains a huge share in Turkish oil market with its 3.6 billion USD exports to Turkey in 2006.[277] In 2007, Russia, Iran and Saudi Arabia were the top three crude oil suppliers of Turkey with 9.5, 8.8 and 3.2 million tons of oil respectively. The total of these three suppliers is equal to more than 90 percent of Turkey's crude oil imports. In 2008, on the other hand, crude oil imports from Iran have passed the imports from Russia. Turkey has imported 7.9 million tons of crude oil from Iran while imports from Russia decreased to 7 million tons. The share of Saudi

[275] Kanbolat, Hasan, 2009, "Energy to play great role in Turkish-Russian relations", *Today's Zaman,* 6 August 2009.
[276] Rusya Ülke Bülteni, 2008, *DEİK*, pp. 32-33, retrieved 30 June 2009 from http://www.deik.org.tr/Pages/TR/IK_BultenDetay.aspx?bDetId=32&IKID=35.
[277] Türkiye – İran Ticari İlişkileri, 2008, *DEİK*, retrieved 30 June 2009 from http://www.deik.org.tr/Lists/TicariIliskiler/Attachments/75/Ikili%20iliskiler-%20Mart%202008_TR.pdf.

Arabia remained same in this period while Iraqi share increased to 1.65 million tons. On the other hand, Russia has a dominant position in Turkish oil market when other petroleum products are included. In 2007, Turkey imported more than 60 percent of all other petroleum products except for crude oil from Russian Federation. This level declined below 50 percent in 2008. However, it is still clear that Russia is the most important energy supplier of Turkey as far as all types of oil products are considered.[278]

Being heavily dependant on oil imports enforces Turkish governments searching for strategies to diversify oil suppliers. These efforts have two main dimensions. First one is to diversify import source by concluding new supply contracts with different supplier countries. Second one, on the other hand, is a more assertive objective.[279] Turkey's main oil company TPAO has recently developed new oil projects abroad which can be regarded as an important instrument of Turkey's shifting energy policy.

3.2.2.2.2. Imports of Natural Gas and LNG

The import of oil and petroleum products is followed by natural gas. As the Table 3.1 depicts, imported natural gas and LNG constitutes one third of the total energy imports. The share of imported gas, similar to oil imports, is very high. Almost 97 percent of the total gas necessary for Turkish economy is imported from foreign sources. With this figure, it is not difficult to argue that Turkey is completely dependent on energy supply of other countries. Among them, as in the case of oil, Russian Federation is well ahead of all other gas suppliers of Turkey. Table 3.2 shows Turkey's natural gas and LNG imports for the last decade with respect to sources of import. Russian share in Turkish gas market is higher than total of all other suppliers. The share of Russian gas in Turkish market has grown steadily and has reached almost equal to two third of total natural gas import of Turkey. Russian Federation is followed by Iran with an annual supply capacity of around 6 bcm. Despite the energy crisis in late 2008, the level of natural gas provided by Iran has steadily increased since 2001. The Iran-Turkey pipeline is expected to operate with a full-capacity in the following years, which is 10 bcm per year. Moreover, bilateral talks

[278] The information about 2007 and 2008 oil imports are provided due to special request by Turkish Statistical Institute (TÜİK). See Annex for the detailed oil imports of Turkey for 2007-2008.
[279] Altınay, Galip, 2007, "Short-run and Long-run elasticies of import demand for crude oil in Turkey", *Energy Policy,* Vol. 35, pp. 5829-5835.

between the governments of the two neighboring countries may result in a further cooperation in energy trade. In the early years of gas consumption, Turkey's one of the main suppliers was Algeria. Algerian supply is different in form and together with Nigeria, they are the LNG suppliers of Turkey. Since LNG requires a regasification process, Turkey has a limited LNG import capacity. Therefore, Algeria's share in Turkish gas market has improved as other suppliers using pipelines. In ten years period, the increase in Algeria's exports to Turkey could only increased by one-third. Nigeria's exports to Turkey have also depicted a similar pattern to Algeria. Since 2001, Nigeria provides around 1 bcm of LNG annually. From this point of view, buying LNG from Nigeria instead of increasing the Algerian share is mainly for the purpose of diversification of LNG sources.

Table 3.2. Natural Gas Imports of Turkey between 1999-2008*

Years / Supplier	Russian Federation	Iran	Azerbaijan	Algeria	Nigeria	Total
1999	8.68	-	-	2.96	0.06	11.70
2000	10.08	-	-	3.59	0.7	14.37
2001	10.92	0.14	-	3.62	1.19	15.87
2002	11.57	0.66	-	3.72	1.13	17.08
2003	12.45	3.46	-	3.59	1.10	20.06
2004	14.10	3.49	-	3.18	1.01	21.78
2005	17.52	4.24	-	3.81	1.01	26.58
2006	19.31	5.59	-	4.21	1.09	30.02
2007	22.75	6.05	1.25	4.20	1.39	35.64
2008	22.96	4.11	4.57	4.14	1.01	36.79

* in billion m^3

Source: BOTAŞ, 2008 Yılı Sektör Raporu.

As the Table 3.3 shows, the Nigerian alternative gas agreement was concluded in 1995. This shows that Turkey has been aware of the necessity of diversification since the mid-1990s. Last but not least, a new pipeline between Baku and Erzurum has been commissioned in 2006. The current capacity of the pipeline is 6.6 bcm annually yet due to certain problems Azerbaijan could not send Turkey more than 4.5 bcm of natural gas. However, with the Shah Deniz gas reserves, Azerbaijan seems to be the second best natural gas supplier of Turkey in the following years. However, as shown in Table 3.3., period of gas purchase agreement with Azerbaijan is comparably shorter than other suppliers.

However, a new agreement between Turkey and Azerbaijan would be concluded if Nabucco project is constructed. These are the current gas suppliers.

Table 3.3. Turkey's Natural Gas Supply Agreements

	Quantity (billion m³/year)	Date of Agreement	Period (Year)	Current situation
Russian Federation (West)	6	14.02.1986	25	Active
Algeria (LNG)	4	14.04.1988	20	Active
Nigeria (LNG)	1.2	09.11.1995	22	Active
Iran	10	08.08.1996	25	Active
Russian Fed. (Black Sea)	16	15.12.1997	25	Active
Russian Federation (West)	8	18.02.1998	23	Active
Turkmenistan	16	21.05.1999	30	Inactive
Azerbaijan	6.6	12.03.2001	15	Active

Source: http://www.botas.gov.tr/index.asp

Another supply agreement has been signed between Turkey and Turkmenistan and approved by the Turkish Grand National Assembly in 1999.[280] However, because of problems of Caspian Sea delimitation between the littoral states and the questions over trans-Caspian pipeline, the delivery of Turkmen gas into Turkish gas grid has not been achieved yet. The gas agreement with Turkmenistan, on the other hand, can be viewed as an imperative element of Turkey's strategic role in energy transportation. Since the problems with Iran could not be solved promptly, Turkmen gas would be the necessary source of energy to transfer to Europe by Nabucco or any other future pipeline.

3.2.2.2.3. Imports of Coal

There is an increasing tendency in use of natural gas in Turkish energy market, yet coal has still a considerable share as a conventional source of energy. Furthermore, the use of coal depicts an upwards tendency as well. However, as explained above, most of the Turkey's coal reserves are composed of lignite which provides less calorific value when compared to hard coal. In that sense, particularly some industries, i.e. iron and steel

[280] TBMM, 1999, *Türkiye Cumhuriyeti ve Türkmenistan Arasındaki Hazar-Geçişli Türkmenistan-Türkiye-Avrupa Gaz Boru Hattı Projesinin (Hgb) İfası ve Türkmenistan'dan Türkiye Cumhuriyetine Doğal Gaz Satışına İlişkin Anlaşmanın Onaylanmasının Uygun Bulunduğu Hakkında Kanun,* Kanun no: 4466, 3.11.1999.

industry or cement production, require high quality coal and imports coal from international market. According to General Directorate of Turkish Coal (TKİ) 60 percent of 17.4 million tons of imported coal is used by industrial sectors in 2006.[281] Most of the imported coal, as in the cases of oil and natural gas, is imported from Russian Federation. In 2007, a total 22.9 million tons of coal is imported from other countries. Russian Federation leaded with a share of almost 42 percent. Colombia and South Africa, following Russian Federation, could only provide 2.5 million tons of coal each which is equal to 11 percent of total imports. Other main supply sources for coal are Australia, China, US, Canada and Ukraine. The total coal imports decreased to 19.5 million tons in 2008 opposite to the general trend in the last decade. The economic stagnation of Turkish economy is the main reason of that decline. The dominant position of Russia continued in 2008 with the same share of the previous year. Colombia is the second and Australia is the third main coal suppliers of Turkey. South Africa, US and China are other main suppliers.[282]

3.3. Energy Policy of Turkey

3.3.1. A General Overview

As the given information about Turkey's energy resources, it is obvious that Turkey is heavily dependent on external energy resources. Therefore, developing a particular energy policy to secure sufficient resources is should be evaluated as an unavoidable objective of Turkish government. Being aware of this fact, Turkish government has become more active in energy issues. Particularly, Turkey's activities are concentrated on regional basis, which surrounds the country's bordering energy rich neighborhood as well as Central Asian countries. As for the neighborhood, Turkey is in a process of developing intensive relations with Iran and Iraq. In addition, Turkey has also engaged in certain projects in Turkmenistan and Kazakhstan. Turkey's newly developed active approach may also be found in the words of Turkey's Energy Minister's introduction to the Annual Energy Report issued by the Ministry of Energy and Natural Resources. Mr. Taner Yıldız declared that energy issues requires a multi-dimensional approach which is composed of national,

[281] Kömür Sektör Raporu, p. 14.
[282] The information about 2007 and 2008 coal imports are provided due to special request by Turkish Statistical Institute (TÜİK). See Annex for the detailed coal imports of Turkey for the previous two years.

international, foreign policy and energy diplomacy considerations. The Minister also confirmed Turkey's strategic aim of becoming an 'energy corridor' between the Western countries demanding energy and Eastern countries providing resources.[283] The ministry defines Turkey's main energy policies and priorities as follows:[284]

- Diversifying resources and countries,
- Giving priority to utilization and development of domestic and renewable resources;
- Making ideal use of our country's natural resources potential;
- Developing and implementing effective programs in line with our energy efficiency strategy;
- Improving technical and scientific infrastructure in the field of nuclear energy;
- Increasing our strategic petroleum and natural gas storage capacity;
- Making best use of our country's potential for becoming an energy trade hub;
- Increasing fuel flexibility (allowing for the use of alternative energy resources in production);
- Participating at all stages to the process of transmitting Middle Eastern and Caspian petroleum and natural gas to markets;
- Structuring energy sector as a well-oiled market based on transparency and competition,
- Participating in and ensuring integration with regional cooperation

The list of priorities shows that the primary target of Turkey's energy strategy is the question of diversification. As it is the same in all its EU members, Turkey is currently faced to an ambiguous energy supply phenomenon. There is an increasing consumption trend as a result of economic development. However, there are many candidate buyers for potential resources around Turkey. Therefore, Turkey has to develop new policies not only for cooperating with energy demanding European countries, but also for creating interest on the suppliers' side. Constructing huge energy transportation projects require high amount of capital. Turkey's energy market is not as huge as European market and solely Turkey's energy consumption would not be sufficient to invest on those projects. Without European or American support, Turkey would hardly find investor for huge pipeline

[283] 2008 Faaliyet Raporu, 2009, *ETKB Strateji Geliştirme Başkanlığı,* Ankara: Enerji ve Tabii Kaynaklar Bakanlığı, pp.5-6.
[284] *Ibid.*, p. 45.

projects. Moreover, suppliers would no be willing to supply Turkey's pipeline without the European market. Therefore, the European energy demand which would cross over Turkey may convince the suppliers as well. From this perspective, it is clear that Turkey needs the huge demand figures of European countries in order to obtain its primary energy policy: diversification. Besides diversification, the second priority in Turkey's energy policy is defined as utilizing domestic resources, which includes renewable resources. Similar to many European countries, Turkey tries to adapt itself to the technological innovations. The growing number of wind turbines is the most prominent example of this. However, as mentioned above, the contribution of renewable resources are far from covering Turkey's energy demand. Their role may only help to diminish the import dependency at a certain level. Similarly, level of Turkey's domestic reserves is also a controversial issue. According to some, there are high oil and gas potentials in Turkey. There are some signals of a potential.[285] However, even if there is a high potential, it will require time and investment. Therefore, Turkey should better follow policies based on close relations with suppliers. Being aware of this fact, the policy makers of ETKB noted 'the potential of becoming an energy trade hub' and stressed the importance of 'regional cooperation' as well. Finally, another crucial point for Turkey has also been considered by the energy bureaucracy of Turkey. They believe that Turkey should develop its own nuclear energy capacity, which would contribute to Turkey's total energy supply. Energy ministry called out its fourth tender for building and operating a nuclear plant in 2008. Only one of the applicants, the consortium of Russian companies Atomstroiexport and Inter Rao and Turkey's Park were in conformity with the tender conditions.[286] However, the tender was cancelled by electric distribution company TETAŞ, who is responsible for the tender in the name of energy ministry.[287] However, the government and energy bureaucracy is determined to build a reactor and will call out a new tender. The nuclear power, therefore, is perceived as an important way of providing diversification for Turkey's energy dependency problem.

[285] TPAO has many different exploration, development and production fields ranging from Black Sea to Thrace and South East Anatolia.
[286] Nükleer Santral İhalesine Tek Başvuru, 2008, *CNN.com,* 25 September 2008, retrieved 30 July 2009 from http://www.cnnturk.com/2008/ekonomi/genel/09/24/nukleer.santral.ihalesine.tek.basvuru/494280.0/index.html.
[287] Nükleer santral ihalesi yine iptal, 2009, *Radikal,* 20 November 2009.

Turkey perceives the energy issues as a part of its foreign policy as well. In 2009, Ministry of Foreign affairs issued 'Turkey's Energy Policy', which explains Turkey's priorities in energy issues as a part of its foreign policy.[288] Parallel to the energy policy defined by the energy bureaucracy of Turkey, foreign policy makers are motivated by the uniqueness of Turkey's transit role in energy politics. Furthermore, from a foreign policy perspective, they believe that "The pipeline projects linking the Caucasus and Central Asia to Europe will be essential for the region's integration with the West. Secure and commercially profitable pipelines will help bring stability and prosperity to the region."[289] For providing stability and peace to the region, therefore, Turkey's strategic assets such as BTC or South Caucasus Pipeline are vitally important steps.

In order to fully comprehend Turkey's energy position, it may be helpful to have a detailed analysis of some of the above mentioned issues. Turkey's production was evaluated in detail before. Here, an analysis of currently functioning energy projects as well as an evaluation of debates on nuclear question may help to make some conclusions in the final chapter of this study.

3.3.2. Turkey's Tangible Assets

Turkey's increasingly aggressive energy policy overtly searches for becoming a centre of energy sources which will play the role of resource distributor. However, envisaging policy prospects or making strong declarations are not sufficient to achieve that goal. The Turkish policy makers have long been conscious of this fact and started to forge ahead since late 1990s. For instance, they engaged a tough fight to construct the famous Baku-Tbilisi-Ceyhan (BTC) Pipeline Project, which has strengthened Turkey's position in energy politics. Similarly, the other pipelines are vitally important for improving Turkey's role as an energy hub. These are Turkey's tangible assets and should be assessed for a prompt evaluation of Turkey's contribution to European energy security.

[288] Türkiye'nin Enerji Politikası, 2009, *Ministry of Foreign Affairs*, retrieved from http://www.mfa.gov.tr/turkiye_nin-enerji-politikasi.tr.mfa.
[289] *Ibid.,* p. 2.

3.3.2.1. Baku-Tbilisi-Ceyhan Crude Oil Pipeline

It is not an exaggeration to say that BTC project is the most prominent success of Turkey in recent Turkish political history. The success of this project was not only a victory over other possible routes for transporting Azeri oil to world markets, but also means a great contribution for Turkish economy. However, presenting some technical data about the project may be helpful before mentioning the potential benefits and significance of the BTC Pipeline in more detail. The BTC project was designed for constructing a safe and secure transportation system for Caspian Crude oil. Therefore, as it is shown in the map below, the route of the pipeline is somehow longer than alternatives. The BTC project starts at Azeri-Chirag-Guneshli oil fields in the Azerbaijani shores of Caspian Sea and arrives in Turkey at Posof passing through Georgia. Within the territory of Turkey, the pipeline passes through Erzurum and Sivas, from there reaches to the terminal in the Port of Ceyhan in Mediterranean Sea [290]. The entire length of the pipeline is 1,768 meters with an annual capacity of 50 million tons of oil. However, the BTC Project Director Mr. Osman Göksel declared that the pipeline capability may be increased 50 percent which equals to 75 million tons of crude oil. The expansion of pipeline capacity to this amount requires investment for increasing the number of pumping stations.[291] The estimated period for operation is 40 years; however, it may be extended depending on several factors: These factors are: (1) the will of parties on further cooperation, (2) implementing technical improvements and necessary maintenance of the pipeline, and finally (3) having sufficient resources to pump into the pipeline.

BTC is the second longest oil pipeline after the 4,000 km Druzhba Pipeline cross passing Russia. The pipeline lays 443, 249 and 1076 km long in Azerbaijan, Georgia and Turkey, respectively. There would be shorter ways to transport Azeri oil to international market. The main reason for selecting this longer route is somehow political. First of all, a shorter route would be transfer to the Persian Gulf via passing through Iranian territory. SOCAR, Azeri state oil company, ships oil across the Caspian Sea to the Iranian port of Neka, and then Iran exports an equivalent volume out of its Middle East Gulf facilities.

[290] For more technical data about the BTC project, see: www.btc.com.tr.
[291] This information is expressed in a speech by Mr. Osman Göksel in a special meeting in Ankara on 30 September 2009.

During the construction of BTC Iran suggested that this mechanism be used for most of Azerbaijan's oil. However, Azerbaijani government rejected the Iranian proposal.[292] Moreover, the American veto over any kind of route passing through Iran disappointed shorter alternative routes even passing 40 meters inside the Iranian borders, which would shorten the construction of pipeline. Even though there is no direct role in the project, US position was vitally important because of several reasons. Firstly, US companies have taken part within the construction consortium and took part in the operating company as well. In addition, as a global oil buyer, the US has a considerable impact over energy producers and also has direct impact over capital providers. Another interest in the region for US is the fact that American firms hold substantial shares of almost every major Caspian consortium agreement.[293] Therefore, it was clear that without approval by the system's hegemon, it was more than difficult to start BTC. After eliminating routes passing through Iran, another shortcut would be a transit pass via Armenia for the sake of technical and economic simplicity. However, the long-standing dispute over Nagorno-Karabakh between Armenia and Azerbaijan naturally inhibited any proposal that may shorten the length of BTC. Because of these reasons, BTC has become the second longest oil pipeline of the world.

Alternatives for BTC project were not limited to projects passing Armenian or Iranian territory. As the political and dominant energy actor of the region, Russia proposed a project as well as oil companies alternative route as shown in Table 3.1: (1) Baku-Supsa Oil Pipeline, (2) Baku-Novorossiysk Oil Pipeline. These pipelines were suggested by Russia as alternatives to Turkey's BTC project. The former one is also known as 'Western Early Oil Pipeline'. In mid-1990s, the ambiguous situation about the BTC project's possibility and the efforts to market the Azeri oil to international market resulted in Baku-Supsa pipeline project. Running 833 km from Sangachal in Baku to Supsa port in the Black Sea coast of Georgia, this pipeline could only transfer 7.2 million tons of oil annually. The pipeline was planned, constructed and operated by BP in cooperation with Azeri national oil company SOCAR and Azerbaijani International Operating Company.

[292] Azerbaijan economy: Suffering for Georgia, 2008, *EIU ViewsWire,* retrieved 11 December 2008 from http://proquest.umi.com/pqdlink?Ver=1&Exp=12-10-2014&FMT=7&DID=1566694381&RQT=309.
[293] Bremmer, Ian, 1998, "Oil Politics: America and the Riches of the Caspian Basin", *World Policy Journal, Vol. 15, No.1,* p. 28.

Map 3.3 Map of BTC and Alternative Pipelines

Source: http://www.globalsecurity.org/military/world/azerbaijan/images/azerbaijan-map-pipes-1.gif.

The main reason for building this line was Azerbaijan's desire to export their oil as early as possible and to have alternative routes for exporting Azeri oil. For this purpose, Azerbaijani President Aliyev and Georgian President Shevardnadze agreed on pipeline on March 1996 and the construction completed in 1998. The first Azeri oil started to be transported by the Baku-Supsa pipeline on April 17, 1999.[294] However, the pipeline had faced to severe difficulties in operation and BP has suspended the use of Supsa line for several times. In October 2006, pipeline was closed by the operator for 10 days of maintenance but then BP declared a delay in reopening due to some 'anomalies'.[295] In August 2008, Georgian government blamed Russian government for an assault on Baku-

[294] Transport Routes for Azeribaijani Oil, *Heydar Aliyev Foundation*, retrieved 5 May 2008 from http://www.azerbaijan.az/_Economy/_OilStrategy/oilStrategy_05_e.html.
[295]Reopening Baku-Supsa pipeline not high prioritiy-BP, 2007, *Reuters UK*, retrieved 16 April 2008 from http://uk.reuters.com/article/idUK163532820070416.

Supsa pipeline.[296] BP suspended the operation of Baku-Supsa as a precautionary measure, yet they did not declared any impact on pipeline infrastructure after the alleged Russian air attack on Georgian territory.[297] Currently the pipeline is functioning but with a very low volume of its original capacity. Due to above mentioned problems; the pipeline could only pump 400 thousand tons of oil during the whole 2008. In the first half of 2009, this amount reached to 1.7 million tons yet still far from its actual capacity.[298] Since the delivery from this pipeline is much less than BTC and both pipelines are operated by the same company, BP, Baku-Supsa became a secondary line which may contribute in case of any disruption on BTC line.

The Russian alternative, on the other hand, was a longer pipeline starting from the same terminal in Baku and ended in Novorossiysk port in Russian territory. The pipeline is a demonstration of Russia's eagerness to continue its domination over the transfer of Caspian oil into the world energy markets. Moreover, by building a pipeline to Novorossiysk, Russia would be relived from paying high transit fees to Ukraine for transferring Siberian oil to the port in Bleak Sea.[299] Against Turkish proposal for BTC pipeline and Georgian proposal of Baku-Supsa pipeline, Baku Novorossiysk was concluded in a shorter period of time and started to pump Azeri oil in October 1997. It is longer than Baku-Supsa with a length of 1,330 km passing through Dagestan and Chechnya and its annual capacity is equal to 5 million tons.[300] The pipeline is operated by SOCAR within the Azeri borders and by Transneft[301] within the Russian territory. During late 1990s, the bilateral relations of Russia and Azerbaijan fostered the Novorossiysk line. The only problem for the pipeline was the dispute of transit fees between Russia and

[296]Attack on Baku-Supsa Pipeline, 2008, *Georgia Update,* retrieved 7 November 2008 from http://georgiaupdate.gov.ge/en/doc/10006883/Microsoft%20Word%20-%207%20Baku-Supsa%2007%2011% 2008.pdf.
[297] Upstream, 2008, "BP shuts in Georgia links", retrieved 12 August 2008 from: http://www.upstreamonline.com/live/article16 0951.ece.
[298]Baku-Supsa Pipeline Volume Increases", 2009, *The Messenger Online,* retrieved 17 August 2009 from: http://messenger.com.ge/ issues/1920_august_17_2009/1920_econ_four.html.
[299] Russia considers new pipe plan, 1998, *Hart's Daily Petroleum Monitor,* p. 1, retrieved 20 September 2008 from: http://proquest.umi.com/pqdlink?Ver=1&Exp=12-10-2014&FMT=7&DID=33974154&RQT=309.
[300] Country Analysis Briefs: Azerbaijan, November 2008, retrieved 17 August 2009 from http://www.eia.doe.gov/cabs/Azerbaijan/pdf.pdf.
[301] Transneft is Russian state owned pipeline operator, which controls a total pipeline network lenght of almost 50,000 km througout the Russia.

Government of Chechnya until mid-2000s.[302] However, the introduction of BTC as a new way of Azeri crude oil to the world markets has changed the situation. The majority of Azeri oil is transferred from BTC since the first pumping in May 2005. This, in turn, provided Azerbaijan leverage in its relations with Russia. In late 2007, Russia has tended to renew its gas agreement with Azerbaijan and demanded a price increase from 110 to 230 USD. In response to Russian step, Azeri government decided to halt oil pumping to Baku-Novorossiysk pipeline.[303] This situation did not last long and because of production growth in the Azeri-Chirag-Guneshli oil fields as well as increasing throughput from Kazakhstan, the current capacity of BTC has already been used by February 2009. The decline in the level of oil transport from Novorossiysk pipeline has turned into an increasing trend due to Azeri government's decision. SOCAR declared in April 2009 that they plan to double oil exports via Novorossiysk by that year.[304] In short, the other two pipelines opening Azeri oil fields in Baku to world oil markets can only transport a total of 12.2 million tons annually. This level is less than BTC's current capacity which is equal to 50 million tons of crude oil. In addition to this, introduction of new pumping stations may increase this level to 75 million annually. Therefore, the other options for Azeri oil are far from competing with BTC since any possible route over Iran is neglected.

The operating company of BTC is different from the ownership. The responsible operator for the Turkish section of the BTC is BOTAŞ International Limited (BIL). The BP Azerbaijan is responsible for the operations outside the Turkish territory. However, the ownership is different. BP Azerbaijan and BIL are charged by the owners in order to operate the pipeline. To clarify the ownership and partners of the pipeline is also important since it may show the strength of BTC against any kind of external threats. As the Table 3.4 shows the bigger partners of the project are BP and SOCAR. Total of US companies in the project is slightly above 10 percent. After long disputes over the shares, Turkey could guarantee only a small share from the project. Norway, Italy, France, Japan and with a very tiny share Saudi Arabia are the other shareholders of the project. This structure may

[302] Clover, Charles and Corzine, Robert, 1997, "Pressure for new Caspian Oil Route" *Financial Times,* p.5, 3 September 1997.
[303] Hacıoğlu, Nerdun, 2007, "Kriz Boğazlara Yaradı", *HurriyetUSA,* 1 Eylül 2007, retrieved 22 September 2008 from http://www.hurriyetusa.com/haber/haber_detay.asp?id=10530.
[304] Azerbaijan Oil, 2009, *US Energy Information Administartion (EIA)*, retrieved 18 September 2009, from http://www.eia.doe.gov/cabs/Azerbaijan/Oil.html.

suggest that the ownership structure of the project is quite strong. Both partner oil companies and their respective countries of origin have significant interest on the project. From this point of view, it is clear that their struggle for constructing this pipeline will also prevail throughout the functioning of the project for at least 40 years. It is also interesting that German energy companies did not take part in this configuration. Germany abstention

Table 3.4 Ownership Structure in Baku-Tbilisi-Ceyhan Pipeline

Company	Share (in percent)	Country of origin
BP Exploration Ltd.	30.10	United Kingdom
SOCAR	25.00	Azerbaijani
Chevron	8.90	United States
Statoil	8.71	Norway
TPAO	6.53	Turkey
ENI	5.00	Italy
Total	5.00	France
Itochu Inc.	3.40	Japan
Inpex	2.50	Japan
ConocoPhillips	2.50	United States
Delta-Hess Ltd.	2.36	Saudi Arabia / United States

Source: BTC Website: www.btc.com.tr

may be attributed to the fact that Germany has developed clear and friendly relationship with Russia as far as energy supply is considered. Any German country taking part in BTC would probably not be welcome in Russia. However, it is something different from German interest on diversification. Germany's and Austria's interests in Iranian energy fields and their eagerness to develop relations with Iran is a clear example of Germany's efforts to diversify energy supply, which will be evaluated in the final chapter of this study.

In light of the given historical development of the project, BTC pipeline completed in 2006. As a result of a great effort performed primarily by Turkey, the BTC pipeline project has overcome many controversial issues such as its length of more than 1700 km, its direction, its enormous cost totaled almost to 3 billion USD, natural difficulties in construction and problems in land-acquisition process. All these problems were eliminated one by one and the first Azeri crude oil was loaded to tankers in Ceyhan Terminal on June 2. As of 23 September 2009, 723 million barrels of crude oil is loaded into 911 tankers, which is equal to approximately 100 million tons of oil. It brought many advantages to its

beneficiaries. Initially Azerbaijan, as the producer country, has certain benefits. First of all, Azeri government does not need to negotiate with Russia any more for its oil exports. Moreover, they have a bargaining power for some other political issues as in the case of natural gas prices. Secondly, with the 42 inch diameter of BTC pipeline, they have a great potential for export. There capacity of oil produced in the Caspian fields of Azerbaijan has been growing since the opening of the BTC. Today, the BTC pipeline has already been functioning with its full capacity. This level of oil export provides enormous economic benefits to Azerbaijan. Finally, Turkey's political and economic stability provides security for Azerbaijan to export its oil without a serious disruption when compared with Iran. Iran's continuing problems with international community particularly over the nuclear issue could pose disruptions in oil transport if Azerbaijani government had preferred any kind of Iranian alternative. Second beneficiary of the BTC is a group of oil importers and commercial companies operating in Azeri oil fields. BTC pipeline provides various factors of supply security for the transportation of Azeri oil. For example, the political stability of Turkey is an important element of supply security. Despite the political problems in Georgian part of the pipeline, stability in Turkey provides a great comfort for this group, which is mainly consist of Western countries and their affiliated oil companies. Finally, Turkey is the third beneficiary of the project.

The first positive impact of the project on Turkey is economic. It provides transit fees in terms of transit tax and business services. BTC coordinating company expects an annual income of 140-200 million USD for the first 16 years, then 200-300 million for the rest of the project.[305] Moreover, the construction of the pipeline brought Turkey some advantages in terms of employment, material and equipment. Most of the labor force and material used in construction process is provided by Turkish companies.[306] In that sense, only the construction process of the project provided more than 22,000 workforce for the Turkish economy. Another economic benefit of the project for Turkey is the profit of TPAO as a

[305] BTC Projesi, 2009, *Bakü-Tiflis-Ceyhan HPBH Proje Direktörlüğü, retrieved* 18 September 2009 from *http://www.btc.com.tr/proje.html.*

[306] The pipes and other material used in construction were mostly manufactured in Turkey for the Turkish section. Various sections of the pipeline inside Turkey's borders were constructed by some famous Turkish contractors such as Tepe, Limak or Alarko. The new marine terminal in Ceyhan was also built by a Turkish company: Tefken. For more information, see: BTC Section – Construction Begins, 2003, *Azerbaijan International,* Vol. 11, No.2, pp. 78-81.

shareholder of the company operating the oil-fields and transportation of Azeri oil. Last but not least, many individual land owners who have fields throughout the pipeline route have gained revenues from the process of land acquisition.

The project has some social and environmental benefits for Turkey as well. During the construction process, more than 350 archaeological sites have been identified. A program for educating local people on traffic safety and security has been developed by the operating company because of the intensive heavy-duty truck traffic in the construction area. In addition to these social affects, the project has brought some positive environmental consequences as well. One of the most prominent of them is the forestation. More than 60 thousand trees planted throughout the BTC pipeline. However, the most impressive impact is about the Bosporus. If alternative routes to BTC ending in Black Sea ports were implemented, the tanker traffic on the Bosporus would be very intensive. Then, the possibility and risk of an accident on the Bosporus would be much higher than today. The environmental affect of a gigantic tanker wreck would be catastrophic. Therefore, the main environmental benefit of BTC for Turkey is its contribution to lessen the tanker traffic on the Turkish straits.

Finally, Turkey has clear political benefits from the implementation of BTC project. By providing the support of many European and American companies, Turkey has confirmed its potential role as an energy hub between the suppliers of the East and buyers of the West. Secondly, Turkey could achieve to become an active player of the energy game played in Caspian region. Having a share higher than Total and ENI, Turkey's TPAO has become more active in the region. Turkish petroleum company's further activities continue in Kazakhstan as well.

To sum up, all these benefits reaffirm that BTC pipeline is one of the most significant achievements of the recent Turkish political history. Caspian resources are very important for all international actors from Europe to China. However, the transportation of the resources is also an important question. Iran stands to benefit from transporting the Caspian oil, and so has a strong interest in improving relations with the regional energy-producers. Russia, on the other hand, insists on perceiving the Caspian Basin as its backyard and is not happy with the current developments. From that point of view, BTC

project has reinforced Turkey's determination to play a more assertive role in energy politics and somehow supported the further projects such as Nabucco.

3.3.2.2. Iraq-Turkey Crude Oil Pipeline

Iraq-Turkey Pipeline is the first project that introduced Turkey to the energy politics as an transit country. There are two parallel pipelines built from Kirkuk in Northern Iraq to the terminal at the port of Yumurtalık in Ceyhan, Adana. The first one was commissioned in 1976 and started operation in May 1977. The initial capacity of this first pipeline was 35 million tones annually. This capacity was increased to 46.5 million tones after the expansion project was finished in 1984. However, the route through Turkey is the best route since any other routes over Israel or Syria attach high risks. Therefore, in a couple of years a second line was built parallel to the initial pipeline. When the second line completed in 1987, the total capacity has reached to 70.9 million tones per year, which is quite higher than the current level of BTC. The lengths of the pipelines are also shorter than BTC. The first line is 968 km of which 641 km lies inside Turkey and 345 km lies in Iraqi territory. The Iraqi section of the second line is shorter with a length of 234 km. The Turkish section, on the other hand, is longer than the first pipeline, with a length of 656 km. In aggregate, because both lines are shorter than BTC, the amount transferred per year is higher than BTC. [307]

However, oil pumping to the pipelines have been suspended for many times since the Gulf War in 1990. Four days after Iraq's invasion of Kuwait, UN issued a resolution. [308] According to the UN sanctions, all trade and financial resources with certain medical and foodstuff exceptions were banned. In line with UN sanctions, Turkey stopped the oil transportation through Kirkuk-Yumurtalik pipeline on August 1990. After the end of the Gulf War in early 1991, the sanctions continued as a result of another UN decision[309]. UN Resolution 687 reiterated the sanctions imposed by the previous resolution and required the destruction of all kinds of chemical, nuclear and biological weapons as well as long range

[307] Iraq-Turkey Crude Oil Pipeline, 2008, *BOTAŞ*, retrieved 21 December 2008, from: www.botas.gov.tr
[308] United Nations, 1990, Resolution 661 (S/RES/0661) adopted by the Security Council at its 2933rd meeting on 6 August 1990.
[309] United Nations, 1991, Resolution 687 (S/RES/0687) adopted by the Security Council at its 2981st meeting on 3 April 1991.

missiles. Limited oil exports have been allowed in 1996 after the agreement between UN and Iraqi government. As a result of the negative reactions of the Saddam Hussein government to the UN decisions and lack of necessary cooperation by the former Iraqi officials to UN inspectors, the sanctions persisted until May 2003 and could only be fully lifted after the fall of Saddam Hussein.

Some other problems, however, have not permitted the pipeline to operate promptly with a full-capacity. The first problem of the pipeline is about instability in Northern Iraq. After the US led invasion of Iraq in 2003, the pipeline has become a principal target for sabotage.[310] Several bomb attacks to the pipeline continued until 2007. Oil flows have increased to almost a quarter of Iraq's oil exports to world markets since then, yet there are still some pauses in pumping of oil due to similar sabotage at the local level.[311] In addition to the assaults on pipeline, stealing oil from the pipeline is another problem which causes disruptions on oil flow. Moreover, staying out of use for a very long time has caused some technical problems in Kirkuk-Yumurtalik Pipeline. However, it is clear that despite all of the mentioned deficiencies, this line is one of the most important export ways of Iraqi oil. There are some alternative plans to Iraq-Turkey pipeline, yet Turkey is still the most reliable partner for transporting Northern Iraqi oil. The idea is reinforced when the Deputy Oil Minister of the new Iraqi government declared the plans over a new line which bypasses attack-prone areas in Northern Iraq. That new plan for the route of Iraqi oil envisages Ceyhan as a destination as well.[312]

3.3.2.3. Blue Stream Natural Gas Pipeline

One of the most important assets of Turkey in energy politics is the Blue Stream Pipeline. There were many questions about the benefits of the pipeline during the construction period as well as allegations for corruption.[313] However, when the pipeline

[310] Explosion at the fuel pipeline west of Baghdad, 2003, *USA Today,* retrieved 23 December 2008, from http://www.usatoday.com/news/world/iraq/2003-06-22-iraq-oil_x.htm.
[311] Iraq-Turkey oil pipeline halts pumping, 2009, *ReutersUK,* 24 November 2009, retrieved 5 December 2009 from: http://uk.reuters.com/article/idUKGEE5AN12J20091124.
[312] Iraq considering new Kirkuk-Ceyhan line, 2007, *United Press International,* 26 September 2007, retrieved 5 December 2009, from http://www.upi.com/Science_News/Resource-Wars/2007/09/26/Iraq-considering-new-Kirkuk-Ceyhan-line/UPI-40771190832213/.
[313] Former Energy Ministers Mr. Cumhur Ersümer and Mr. Zeki Çakan were accused of –under the then Prime Minister Mesut Yilmaz's direction- hiding the full context of the agreement and causing losses to the

completed in 2005, many of those concerns disappeared. Before evaluating the political implications of Blue Stream pipeline, some informative data may help to understand the significance of the project and its contribution to Turkey's energy policy.

The Blue Steam project is a 1,213 km pipeline between Russian Izobilnoye gas plant to Ankara. Russia's land section is 373 km ending in Beregovaya terminal at a small town in the south of Novorossiysk port. The offshore section is 396 km long starting from Beregovaya terminal and ending in Durusu Terminal close to Samsun at the Black Sea coast of Turkey. From there, a 444 km long section brings Russian gas to the terminal in Ankara. The sub-sea part of the pipeline is 2.2 km depth and is one of the deepest pipelines in the world. The Russian land section is owned and operated by Gazprom and Turkey's section by BOTAŞ. The offshore section, on the other hand, is owned by the Netherlands based Blue Stream Pipeline B.V., which is a joint venture of Gazprom and Italian ENI. The construction of the pipeline started in 2001, four years after the agreement signed in 1997 due to several discussions and protests over the agreement between Turkey and Russia. The construction ended in early 2003 and flow of natural gas started by then. However, the inauguration of the project could only be organized on 17 November 2005 due to the price dispute between Turkey and Russia.[314] The agreement between these two countries foresees a purchase agreement for 25 years based on the sale of 16 bcm natural gas annually.[315]

The main purpose of Blue stream pipeline was to deliver Russian gas to Turkey and avoiding the third countries. At that time, Turkey's energy consumption was continuously increasing and Blue Stream was one of the options for a supply solution. By selecting Blue Stream, not only price increases due to transit fees would be eliminated but also it was argued that the Russian gas is comparably cheaper than other alternatives; i.e. the Turkmen

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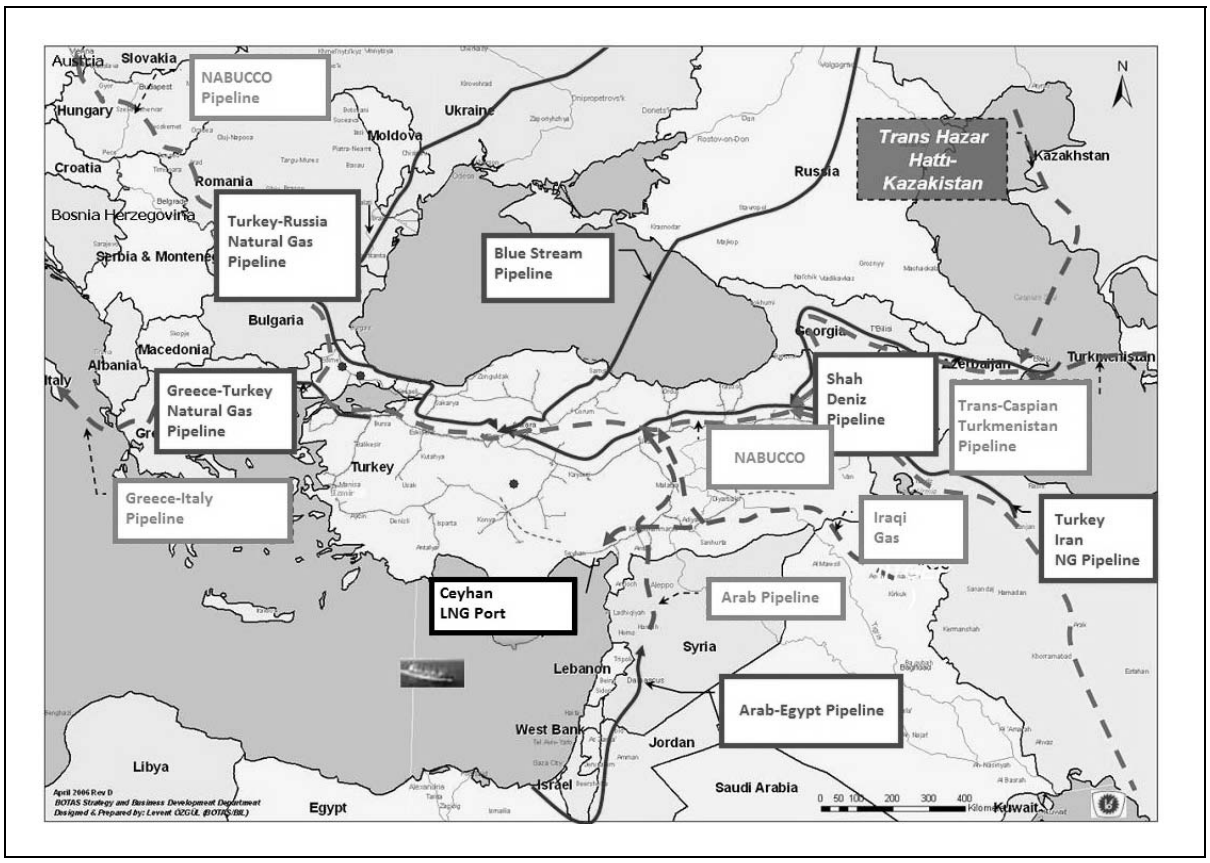
detriment of Turkey by high prices agreed on Russian gas. For details, see: Ögütçü, Mehmet, "Caspian Energy Poker Game and Turkey: Prospects for a New Approach", paper presented to *Conference on International Energy Security and Regional Instabilities – Strategic Perspectives of Globalization, Geopolitics and Regional Power Balance in the 21st Century,* 6-7 November 2000, Berlin.

[314] For more details about the project, see: Blue Stream, 2009, *ENI,* retrieved 14 Januarry 2009 from http://www.eni.com/en_IT/innovation-technology/eni-projects/blue-stream/blue-stream-project.shtml; Blue Stream, 2009, *Gazprom*, retrieved 14 January 2009 from http://www.gazprom.com/production/projects/pipelines/ bs/; Mavi Akım Vanası Resmen Açıldı, *BBC Turkish,* retrieved 14 Januarry 2009 from http://www.bbc.co. uk/turkish/europe/story/2005/11/051117_bluestream_pipeline.shtml.

[315] Blue Stream Contracts Signed, 2000, *Pipeline &Gas Journal,* Vol. 227, No.1, p. 14.

gas. In addition to this price advantage, having a direct line to the Russian pipeline net has been argued as a great contribution to Turkey's ambitious plan of becoming an energy distributor.

Map 3.4. The Route of Existing Import Pipelines



Source: http://www.botas.gov.tr/index.asp

However, some others[316] argue that blue stream is both economically and strategically in disadvantage of Turkey. According to this view, Turkey has become very much dependent on Russian gas as a result of Blue Stream project and regional balance between Turkey and the Russian Federation has shifted in favor of the latter. On the other hand, some arguments about the Blue Stream reinforce the proponents of the project. For example, there is a project for providing Russian gas to Israel via Turkey. Gazprom' President Mr. Alexey Miller and Turkey's former Energy Minister Mr. Hilmi Güler met early 2009 and discussed on further energy cooperation between the two countries. On the top of their

[316] Özdemir, Volkan, 2007, "The Blue Stream Natural Gas Pipeline: Implications on Energy Security and Foreign Policy", *Orta Doğu ve Kafkasya Araştırmaları Dergisi,* Cilt:2, Sayı: 3, pp.135-148.

agenda was the Blue Stream II pipeline which will deliver natural gas to Israel. Another international development that may contribute to the defenders of Blue Stream is the South Stream Project developed by Russia primarily as an alternative to Turkey's Nabucco project. It is clear that Russia is searching for alternative ways for supplying gas to Europe that eliminate transit countries. As in the cases of Ukraine or Belarus, any disagreement between Russia and transit countries may cause a disruption in the European energy markets. This is the main reason that Germany and Russia is working on Northern Stream Pipeline. From this point of view, South Steam pipeline is a project that proposes a direct route to Europe from Russia. Then, as Mr. Miller envisages, Turkey and Gazprom may become strategic partners in energy politics.[317] This partnership may include gas delivery to European countries as well. Therefore, Blue Stream project may be much more important for Turkey than solely supplying natural gas for Turkey's own requirements.

To conclude, Blue Stream Pipeline connected Turkey to the hegemon of natural gas: Russia. Although, this project increased Turkey's dependence on Russian gas, it also increased Turkey's capabilities as an actor of regional energy politics. Since stability in and reliability of Turkey is much higher than other buffer states like Ukraine or Belarus, there is a possibility of being a bridge between Russia and Europe. From this point of view, the Blue Stream project is an element of Turkey's increasing transit role.

3.3.2.4. South Caucasus Pipeline

After the BTC crude oil pipeline has become operational and profitable for both countries, the energy relations between Turkey and Azerbaijan has gained a momentum. In light of this, another project was designed to transport the Caspian gas to initially Turkey and later on to the world energy markets. South Caucasus Pipeline which is also known as Baku-Tbilisi-Erzurum pipeline, is planned as a 42 inch diameter pipeline parallel to the route of BTC crude oil pipeline. The starting point is Shah Deniz gas field in the Azeri sector of the Caspian Coasts and it ends at

the Turkish-Georgian border. The pipeline lays 442 km long in Azerbaijan and 248 km long in Georgia. From the Turkish border, an internal pipeline connects the Azeri gas to

[317] İkinci Mavi Akım Projesi Masada, 2009, *CNNTürk.com*, retrieved 25 August 2009 from http://www.cnnturk.com/2009/ekonomi/genel/03/26/2.mavi.akim.projesi.masada/519684.0/index.html.

the domestic supply grid near Erzurum. Main line construction activities commenced in late 2004 and were completed in May 2006 and the total midstream investment is about 1.3 billion USD, which was covered by the shareholders of the project. Because the line lays parallel to BTC, some part of the construction costs could be saved. As in the BTC project, an international consortium has been formed to build and operate the pipeline. As shown in table the majority stockholders of the project are BP and Statoil. TPAO and TOTAL has a considerable share similar to BTC. However, this time Russian and Iranian companies have also taken role in gas delivery to Europe.[318] The initial capacity of the pipeline is planned as 8.8 bcm of gas annually. However, the Shah Deniz development program by BP, Statoil and SOCAR is expected to increase this level to 20 bcm of gas at the earliest in 2012.

Table 3.5 Ownership Structure in South Caucasus Pipeline

Company	Share (in percent)	Country of origin
BP Exploration Ltd.	25.5	United Kingdom
Statoil	25.5	Norway
SOCAR	10.0	Azerbaijan
LUKoil	10.0	Russia
Naftiran (NICO)	10.0	Iran
TOTAL	10.0	France
TPAO	9.0	Turkey

Source: BP, www.bp.com

The pipeline currently supplies natural gas for Turkey and Georgia, but when the above mentioned production development process ends, the Azeri gas will be pumped to the European gas network via Turkey-Greece and Greece-Italy pipelines as well as Nabucco.[319] Moreover, the future plans for a trans-Caspian pipeline project may also increase the gas in SCP by connecting the Kazakh and Turkmen gas fields into this line. Most of the current gas in this pipeline is used by Turkey, while a small portion of the Azeri gas (5 percent of the annual flow) is used by Georgia in exchange for the transit fee.

[318] Press Release: SCP Commissioning Commences, 2006, *BP,* retrieved 20 September 2008 from http://www.bp.com/genericarticle.do?categoryId=9006615&contentId=7018471.
[319] Shah Deniz taps primed, 2006, *Upstream Online,* retrieved 20 September 2008 from http://www.upstreamonline.com/live/article119108.ece.

Moreover, Georgia has a right to purchase a further 0.5 bcm of gas a year at a discounted price.[320]

There are also still some questions over BTC pipeline. Although the gas is currently transferred to Turkey and Greece via Turkey-Greece interconnector, the price offered by Turkey posed a problem on Azeri-Turkish relations. The price Turkey offered for Azeri gas is lower than Russian charges from Azerbaijan. Therefore, the improving Azeri economy and parallel increase in energy needs enforce Azerbaijan government to ask for a higher price for the gas exported to Turkey.[321] In addition, Greek and Azerbaijani governments agreed on energy supply cooperation.[322] In that respect, Azeri government is interested in selling directly to Europe with a more profitable price is more rather than the price offered by Turkey. However, Turkey keeps the right of an annual supply of 6.6 bcm from the Azeri line. Another problem for BTE is related to the transit country: Georgia. First of all, Georgia has severe political instability due to the conflicts in South Ossetia, in which Russia has a direct influence. Because of the safety problems related to this question, the operation of the pipeline was suspended in August 2008 by BP, who is the operator of the pipeline. Gas supplies were resumed in a few day but the risks of similar shortages prevails unless the political stability in Georgia is guaranteed.

The second problem related to Georgia is about sharing the Azeri gas. Georgia is actually in need of Azeri gas and in cases of a decrease in supply from Shah Deniz fields, sharing the gas was a matter of discussion between Turkish and Georgian officials[323]. However, this problem has been easily solved between the two countries because Azerbaijan has provided more gas. Last but not least, the Turkish government's initiative for a rapprochement[324] with Armenia has brought a negative impact on Turkey -

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[320] For more details about South Caucasus Pipeline, see: South Caucasus Pipeline, 2010, *BP,* retrieved 21 May 2010 from http://www.bp.com/sectiongenericarticle.do?categoryId=9006670&contentId=7015095; Billmeier, Andreas, et.al, 2004, 'In the Pipeline: Georgia's Oil and Gas Transit Revenues'*, Middle East and Central Asia Department,* IMF Working Paper No: 04/209, pp. 5-7.

[321] Özerkan, Fulya, 2008, "Turkish-Azerbaijani deadlock over pipeline gas", *Turkish Daily News,* 24 September 2008.

[322] Greece, Azerbaijan agree to promote energy relations, 2008, *Embassy of Greece Washington DC,* retrieved 20 September 2008 from: *http://www.greekembassy.org/Embassy/content/en/Article.aspx?office=1&folder=19& article=23124.*

[323] Özerkan, Fulya, 2007, "Energy to lead Tbilisi agenda", *Turkish Deaily News,* 7 February 2007.

[324] Arsu, Şebnem, 2009, "Turkey and Armenia to Establish Diplomatic Ties", *The New York Times,* 31 August 2009.

Azerbaijani relations. The flag crisis following the protocol signed between Turkey and Armenia in Zurich on 10 October 2009 has not last long.[325]

However, it was clear that any improvement in Turkey-Armenia relations would have negative impact on gas issue. A couple of days after Turkey's Armenian rapprochement begun, Azerbaijan's President Aliyev reminded the problem of low gas price between Turkey and Azerbaijan. [326] It was a clear reaction to Turkey's 'Armenian initiative'. For some experts, Azerbaijan naturally reacted to Turkey, yet they have no other option. Azerbaijan's rhetoric about a strategic partnership with Russia would not mean anything than a political maneuver since Russia provides military backup of Armenia.[327] Some others argue that Turkey's Armenian initiative is not primarily for developing economic relations with Armenia because Armenian market is a very limited economic area. Turkey's actual aim is to improve the relations between Azerbaijan and Armenia. This would help Azerbaijan to be open to Black Sea as well as Turkey to influence an area from Northern Iran to Caspian basin.[328]

Although there are certain instances that affect the development of Baku-Tbilisi-Erzurum project, South Caucasus Pipeline is vitally important both for Turkey and Azerbaijan. Even if the re-exported part of the Azeri gas is not considered, the amount of gas delivered Turkey by the BTE pipeline is almost equal to one-quarter of the gas received from Russian Federation. In other words, BTE directly contributes to Turkey's efforts for diversification of energy supplies. BTE pipeline also contributes for Turkey's ambitious plan to become a regional centre of energy transportation. This is more important than the diversification issue because as the number of pipelines directed to Turkey from energy producing countries increases; the possibility of more assertive projects like Nabucco increases as well.

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[325] Flag crisis with Azerbaijan comes to an end, 2009, *Sabah,* 28 October 2009*, retrieved 8 December 2009 from http://www.sabahenglish.com/world/8621.html.*

[326] Türkiye'ye Doğalgaz Tehdidi, 2009, *Bugün,* 18 Ekim 2009, retrieveed 8 December 2009 from http://www.bugun.com.tr/haber-detay/81019-turkiye-ye-dogalgaz-tehdidi-gundem-haberi.aspx.

[327] Şamiloğlu, Famil, 2009, "Türkiye'nin Ermenistan Açılımı ve Azerbaycan", *USAK Stratejik Gündem,* retrieved 8 December 2009 from http://www.usakgundem.com/haber/45806/-haber-analiz-t%C3%BCrkiye%E2%80%99 nin-ermenistan-a%C3%A7%C4%B1l%C4%B1m%C4%B1-ve-azerbaycan.html.

[328] Arıboğan, Deniz Ülke, 2009, "Ermenistan değil, Azerbaycan açılımı", *Akşam,* 9 October 2009.

3.3.2.5. Iran-Turkey Pipeline

With its vast natural gas reserves, Iran has always been an important actor of energy politics. Turkey, on the other hand, has been in need of diversification of its resources. These two countries have for centuries had no border disputes. Even the ideological diversification after the Iranian Revolution of 1979 did not fatally destroy the Turkish Iranian relations. In light of this, the two neighboring countries of the region have decided to improve their energy trade. The agreement between Iran and Turkey was signed in 1996. The construction had begun the same year and ended in 2001.

Iran-Turkey pipeline is one of the longest one with a length of 2577 km. As usual, BOTAŞ operates the Turkish sector of the pipeline and the cost of that part was 600 million USD. As shown in Map 3.2, it starts from Tabriz in North West Iran to the natural gas terminal near Erzurum in Turkey. In 1996 agreement, an annual transfer of 10 bcm of natural gas flow from Iran to Turkey was planned. However, as depicted in Table 3.2, not more than 6 bcm of gas could be transferred to Turkey due to several reasons.[329]

The first problem causes Iran-Turkey pipeline to fail with a full capacity is the hard weather conditions in Iran. Because of the sanctions on Iran and lack of investment, Iran cannot develop the existing oil fields. In times of hard winter, the Tabriz fields are unable to feed Iran-Turkey pipeline because of the increased domestic demand in Iran. Therefore, Iranian gas authority decreases pumping to Turkey. In early 2008, Turkey faced with a series of cut-off by the Iranian side[330].

Moreover, Iran's ability to send gas to Turkey also affected from decisions taken by Turkmenistan. When Turkmenistan decreases gas transfer to Iran, the latter can no longer be able to send gas to Turkey.[331] Another problem causes disruptions in gas flow from Iran is explosions on the pipeline. The attacks provoked by terrorists are not something

[329] Hakman, Selahattin, 2009, 'Türkiye'nin Enerji Arz Politikaları', İstanbul: Türkiye-AB Karma İstişare Komitesi, pp. 1-9.
[330] Cold halts Iran gas exports to Turkey, 8 February 2008, *Reuters UK,* retrieved 15 November 2010 from http://uk.reuters.com/article/idUKL0881580820080208.
[331] İran gazı kesti, Türkiye'yi Silivri'deki depo kurtardı, 2 Ocak 2008, *Star,* retrieved 12 September 2009 from http://www.stargazete.com/ekonomi/iran-gazi-kesti-turkiye-yi-silivri-deki-depo-kurtardi-80780.htm.

unusual[332] for this pipeline and cost Turkey very high in terms of energy disruption and security spending.

The importance of Iranian gas is naturally very high from Turkey's perspective. Not only the current flow of North Western is significant, but also the potential of South Pars Fields of Iran will be an indispensable part of energy relations between Turkey and Iran. The increasing interest on Austria's OMV over Iranian natural gas reserves reinforces the importance of Iran for the energy hub role of Turkey.

However, the price issue has been another source of discussion. Since the first years of transfer, the price of Iranian gas has been higher than Russian gas.[333] The current level of Iranian production is far from satisfying all its needs, therefore the price for Iranian gas is higher than Russian gas. In order to solve this problem, Turkey has proposed several projects to Iran for energy cooperation. As a result of Turkey's efforts, two countries signed a memorandum of understanding in November 2008.[334] A comprehensive agreement between two neighboring countries envisages not only transfer of natural gas to Europe via Turkey but also cooperation in development of new fields and construction of natural gas power stations. The commissioning of this project at least will double the capacity of current Iran-Turkey pipeline capacity. Turkey goes ahead with Iranian agreement despite the out laud criticism of United States.[335]

Moreover, the accord signed among Turkey, Bulgaria, Romania, Hungary and Austria on transit of gas via Turkey reinforced Turkey's Iranian approach.[336] In short, Iran – Turkey pipeline is currently useful for Turkey to increase energy independence, but its significance will be much more than today when pipelines from Turkey to Europe start pumping.

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[332] Iran-Turkey pipeline blast cuts gas flow, 10 September 2007, *ReutersUK,* retrieved 12 September 2009 from http://uk.reuters.com/article/idUKL1029395120070910.
[333] Erdoğan'ın İran gezisine doğalgaz damga vuracak, 2004, *Sabah*, 12 September 2009 from http://arsiv.sabah.com.tr/2004/07/27/eko101.html.
[334] İran'la dogalgaz anlaşması tamam, 18 November 2008, *NTVMSNBC,* retrieved 12 September 2009 from http://arsiv.ntvmsnbc.com/news/466239.asp.
[335] Türkiye – İran doğalgaz hattına ABD engeli, 2007, *Hürriyet,* 16 July 2007.
[336] Turkey sign Nabucco gas transit agreement, 13 July 2009, *Reuters,* retrieved 12 September 2009 from http://www.reuters.com/article/idUSLD63762220090713.

3.3.2.6. Turkey-Greece Inter-connector

The pipeline between Turkey and Greece is an important part of East-West energy corridor project. Beginning in Karacabey (North-West Turkey) the pipeline passes the Marmara Sea and reaches to the Komotini in Eastern Greece. The pipeline is 285 km long and the diameter of the pipeline is 36 inches. When compared with other pipelines of Turkey, it is slightly narrow and has a capacity of 7 bcm of gas annually. The capacity of the pipeline is expected to be expanded to an annual of 11 bcm of which 8 bcm will be transfered to Italy.[337] The owners and operators of the pipeline are national gas companies of Turkey and Greece, BOTAŞ and DEPA, respectively. The construction of the project started in 2005 and the inaugration of the pipeline took place in late 2007.[338] The Turkey-Greece inter-connector is strategically important because it provides an early flow of Caspian gas to Europe. The economic and continuous gas supply to Greece and Italy via Turkey is an important indicator of stability, thus supply security. This, in turn, will affect the perception of EU members on other routes to Europe passing through Turkey, such as Nabucco. From this perspective, the level of current natural gas flow to Greece justifies the reliability of Turkey. Moreover, the agreement between Greece and Bulgaria for linking their gas grids is another example of increasing confidence on Turkey as a reliable transit country for Caspian and other Eastern sources of energy supply.[339]

3.4. A Brief Evaluation of Turkey's Position in Energy Politics

The given information above helps to conclude certain points about Turkey and energy politics. First of all, it is clear that Turkey is an energy poor country. There may be potentials both in Southern regions of the country or in Black Sea coasts. In that sense, offshore prospects for natural gas is increasing. However, the current energy outlook of the country is not so promising when compared to oil and gas rich neighboring regions such as the Middle East and Central Asia.

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[337] Grohmann, Karolos, 2007, 'Greece Turkey to open joint gas pipeline', *Reuters,* retrieved 14 September 2009 from http://uk.reuters.com/article/2007/11/16/greece-turkey-pipeline-idUKL1256108720071116.
[338] Türkiye-Yunanistan doğalgaz boru hattı açıldı, 18 Kasım 2007, *Hürriyet.*
[339] Greek-Bulgarian Gas Pipeline Agreement Signed, 2009, *Embassy of Greece Washington DC,* retrieved 14 September 2009 from: http://www.greekembassy.org/embassy/Content/en/Article.aspx?office=3&folder=1013&article=24714&hilite=geostrategic.

Secondly, geographical location of the country permits to become a transit country between the energy rich suppliers and energy demanding European countries. Particularly the natural gas and oil reserves of Caspian Basin are restricted with bordering countries. As the most reliable and most democratic of those countries, Turkey seems to be best alternative for Caspian resources. The BTC and BTE are the most obvious examples of this fact. If realized, Nabucco project will further strengthen Turkey's hub role in a world of decreasing energy resources. As well as Caspian resources, Turkey has long been a route for Iraqi oil to reach the world markets. Despite the embargo on Iraq since 1990, Turkey still emerges as the most probable pipeline route particularly for Northern Iraqi oil.

Thirdly, members of the EU are urgently in need of energy sources. They are heavily dependent on Russian energy, which results in vulnerability in foreign relations with Russia. The recent crises of Ukraine and Belarus have already intensified the anxiety among Europeans. On the other hand, Turkey seems to be a viable route for these countries to reach the untouched Caspian resources as well as gigantic Middle Eastern reserves. In line with this point, there are pipelines and other infrastructure that are already installed in the east-west direction through Turkey, which normally requires a considerable time and high level of capital to invest. Most of those investments are initiated for the purpose of providing domestic energy security. However, the capacities of the existing installations have been constructed as if they will transfer more of energy sources than Turkey's domestic market needs. Therefore, the current energy infrastructure is an encouraging asset for Turkey. An interesting point here is the fact that Turkey has developed its relations with Russia in terms of energy cooperation. Not only the construction of the first nuclear energy plant of Turkey, but also transfer of Russian oil from a pipeline crossing the Anatolian peninsula instead of the Straits are among the topics of Russian-Turkish energy deal.

Last but not least, Turkey is a stable country with a long political, economic and military cooperation background with the Western world. Therefore, Turkey may be a reliable partner for the EU members. When compared to former Soviet Union members such as Ukraine or Belarus, Turkey is even a better route for transferring the Russian hydro-carbon resources. Being aware of this fact, the European Commission has also

declared support the ongoing feasibility studies of the Nabucco project. In addition to this, with its democratic institutions and cooperation with international institutions, Turkey has proved to be a better alternative to Caspian resources when compared both with Iran or Russia. However, it should be remembered that decisions in international relations are not contingent on certain ceteris paribus conditions. A more profitable option for BTC would be directly going the pipeline through Iranian territory. Similarly passing through Armenia would be much cheaper when compared with the current line going to Tbilisi in North which caused unnecessary construction costs. However, other things in politics required BTC to follow the currently existing route. As in this example, many advantages of Turkey would become ineffective in decision making process due to several political reasons. Generally speaking, those reasons are resulted both from structural and unit level effects on actor decisions as neo-realism envisages. Therefore, next chapter will provide a broader analysis on energy policies of Europe with respect to neo-realist paradigms and Turkey's role within this scheme.

CHAPTER IV

AN NEO-REALIST EVALUATION OF ENERGY POLITICS IN EUROPE AND TURKEY'S CONTRIBUTION TO EUROPEAN ENERGY QUESTION

4.1. General View of Global Energy Politics

The increasing world population, technological innovations and other developments that improve conditions for a better life have brought an undesirable consequence: Rapid increase in energy consumption. Economists argue that human needs are infinite while the resources are limited. This argument on scarce resources is completely relevant as far as energy consumption and the current level of reserves are considered. In addition to this, industrial production capacities in other parts of the world, such as China and India, have developed in a rapid pace since the end of the Cold War. As a result of the restructuring of production at global scale, redistribution of energy resources among the industrially developed nations has become a necessary arrangement. Furthermore, the growing problem of depletion in most of the energy rich regions has made the energy question more complicated.

From this point of view, the acceleration of energy demand in European countries should somehow be solved by the leaders of these countries in cooperation with the leading elite of the EU. As it was widely examined in Chapter 2, the policies *declared* by member states in energy issues are in conformity with each other as well as the Union objectives.

However, on certain issues, the member state preferences and practices somehow differ from the community interests. There, a gap emerges between their declared policies and actual implementation of energy policies. However, in order to become more competitive in a global world market and more powerful in a new political structure which may be characterized by a slight move from uni-polarity to multi-polarity, member states in particular and the Union in general should develop coherent and long-term approaches in energy issues as a part of foreign policy.

Being aware of this fact, member states are in search of policies for developing new energy sources. Furthermore, the Commission works on proposals aiming to integrate energy markets within the Union as well as promoting energy efficiency and diversification of resources. However, these political efforts of the actors in Europe sometimes contradict with each other. When the interests of actors are in conflict with each other, compromise is hardly achieved. Therefore, the actual behaviors of states are more important than their expressed policies. For a comprehensive understanding of energy politics at the European level, the positions and practices of actors within the EU as well as external actors producing energy resources are vitally important. Being highly dependent on Russian energy supplies, European countries currently search for projects delivering resources from other energy rich countries such as Iran, Qatar and some CIS members in the Caspian basin. However, the same energy rich regions are also targeted by China and India, whose energy demand grows more than European countries. Furthermore, the superpower of the uni-polar world, the U.S., has also certain policies and interests in these regions. There are arguments that the invasions of Afghanistan and Iraq have been regarded not solely as a result of combat against terrorism but also a struggle for control over energy rich regions.[339] On the other side of the game, energy producing countries have also policies to maximize their interests and/or protect their countries from the aggressive energy policies of others. For instance Russia, as an important energy producer,

[339] Even before the invasion of Iraq, Mearsheimer and Walt believed that Iraq could be deterred even if that country acquired nuclear arsenal. See: Mearsheimer, John J. and Walt, Stephen M., 2002, "Can Saddam Be Contained: History Says Yes", *Belfer Center for Science and International Affairs International Security Program Occasional Paper,* retrieved on 25 March 2009 from http://www.comw.org/qdr/fulltext/mearsheimerwalt.pdf.

has been utilizing energy resources as a tool of its foreign policy. This became overt with several crises between some of the former Soviet republics and the Russian Federation.

From this perspective, it becomes clear that energy policies should not be restricted as a part of economic policies of international actors. Energy resources have turned into a strategic matter that concerns the survival of states in current world order. Generally speaking, great powers are directly related to the energy politics because all of the major powers of current international system are industrially developed nations and they are responsible for the greatest share of the world energy consumption. The scarcity of resources, in turn, causes conflict of interests among major powers, who have different plans for the same energy region.

In more concrete terms, the post Cold War period can be defined as a uni-polar structure where the United States assumes the role of a superpower. The unipolarity is expected to be challenged by other major powers, yet other major powers are still away from balancing the United States. Therefore, arguments about a multi-polar international system are far from defining the actual situation, where the military capabilities as well as spending of the leading superpower are still greater than the total of the following five major powers. This makes an open challenge to unipolarity impossible at the moment. However, Russian efforts for balancing the United States as well as the rise of China and India as potential great powers increases the possibility of a future multi-polar international system. The multi-polarity, however, develops particularly in terms of economics rather than military capabilities. Since economic capabilities are becoming more important in determining the structure of international political system, energy resources gain more vitality. In such an intricate atmosphere, all major international actors are expected to engage certain activities in order to secure their future energy requirements. Therefore, the economic outlook of major international actors should also be taken into consideration in order to understand the current paradigm that explains international system.

4.2. An Analysis of Economic Capabilities of Major Powers

As previously mentioned, energy is an important element of foreign policy since most of the capabilities of an actor depends on having sufficient energy resources. Energy

resources provide leverage in terms of economy. Therefore, energy politics require an economic perspective as well as political evaluation. In more concrete terms, an analysis of economic capabilities of major international actors should be taken into consideration in order to evaluate energy policies because the distribution of economic power is slightly different from the distribution of military power and a turn into multi-polarity mostly occurs in the sphere of economic fields.

Table 4.1. Gross Domestic Product (GDP) at constant 2005 prices – US Dollars (Billions)

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	7,969,500	845,224	536,130	352,268	269,684	1,569,130	2,198,324	1,624,938	1,453,346
1991	7,948,600	802,964	585,454	353,759	272,183	1,547,281	2,310,620	1,641,439	1,475,636
1992	8,219,300	686,533	668,586	372,934	288,471	1,549,550	2,362,051	1,663,871	1,487,042
1993	8,455,400	626,804	762,215	391,413	311,670	1,583,983	2,343,103	1,648,669	1,473,834
1994	8,803,300	547,200	862,041	420,626	294,666	1,651,781	2,405,362	1,685,194	1,505,549
1995	9,027,700	524,765	956,255	452,786	315,856	1,702,200	2,450,838	1,720,871	1,548,111
1996	9,369,400	505,833	1,051,852	486,268	337,983	1,751,314	2,475,200	1,739,977	1,565,068
1997	9,791,600	512,819	1,149,661	508,044	363,429	1,809,236	2,519,864	1,778,912	1,594,371
1998	10,222,500	485,410	1,239,310	538,463	374,666	1,874,491	2,571,025	1,841,229	1,616,713
1999	10,720,300	516,238	1,333,501	576,848	362,057	1,939,584	2,622,727	1,902,004	1,640,386
2000	11,167,700	568,098	1,445,552	600,097	386,584	2,015,530	2,706,912	1,976,377	1,700,969
2001	11,289,800	597,020	1,565,647	631,404	364,559	2,065,139	2,740,477	2,013,027	1,731,896
2002	11,496,100	625,342	1,708,185	655,187	387,029	2,108,445	2,740,477	2,033,692	1,739,759
2003	11,783,800	670,699	1,879,053	710,032	407,408	2,167,654	2,734,522	2,055,806	1,739,465
2004	12,206,200	718,662	2,068,930	768,939	445,552	2,231,619	2,767,547	2,106,590	1,766,111
2005	12,579,700	764,568	2,302,719	840,470	482,986	2,280,112	2,788,390	2,146,530	1,777,694
2006	12,916,100	823,254	2,595,164	919,774	516,280	2,343,678	2,882,320	2,194,115	1,813,888
2007	13,192,100	889,616	2,963,678	1,008,386	540,383	2,406,605	2,958,925	2,246,214	1,840,774
2008	13,247,500	939,581	3,248,191	1,060,003	543,945	2,405,034	2,988,160	2,251,087	1,816,505
2009	12,898,808	865,354	3,543,776	1,141,155	518,446	2,285,095	2,847,130	2,191,916	1,724,987

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

Certain indices showing economic capabilities are very important to make a systemic analysis about the distribution of power among international actors. These are Gross Domestic Product (GDP), GDP per capita, and growth rate. The following three tables present these indices since the end of the Cold War. As depicted in Table 4.1, the total of four bigger EU members could only equal to the 85 percent of the GDP of U.S. in 1990. This gap increased in a decade and the four European powers could only have a GDP only equals to 75 percent of the GDP of the United States. This shows that the winner of the Cold War experienced a better economic performance when compared to its European allies during the early years of the unipolar structure. In the same period, Russian economy had a very difficult period and the GDP of the country decreased around 30 percent. In

other words, Russian GDP could only represent 5 percent of the GDP of the US in 2001 while the same ratio was more than 10 percent of the US's GDP in 1990. In terms of a systemic analysis, this means that the ability of Russia to balance the US power in economic terms decreased by the early 2000s. On the other hand, China and India experienced higher GDP growth during the same period. China tripled and India doubled the GDP while the increase of the US GDP was only around 40 percent.

The growth rates also confirm a similar conclusion. Table 4.2 depicts the growth rates of the major powers in world politics and Turkey for the same period. Throughout the 1990s, US economy experienced a stable growth rate. Particularly in the second half of the decade, the Americans achieved almost 5 percent growth rate annually. On the other hand, Russian economy shrank enormously during 1990s. In this period, however, China and India pioneered world economy with incredible growth rates. From this point of view, although Russia was the former superpower who was balancing the US in the Cold War years, China has become an actor with more economic power to balance the American power by the early 2000s. Yet, as in the military realm, the other major powers are still far from totally balancing the America's dominant position. However it should be noted that the growth rates of Russia and China are fairly greater than the United States after 2003 which corresponds with the increasing discourse on multi-polartiy among the leaders and political elites of these two major powers. The major European countries, on the other hand, depicted a similar growth rate with the United States. The power gap between Europeans and the Americans has not markedly changed since the end of the Cold War. In other words, different from Russia and particularly China, European economies did not grow rapidly in the previous decade which could develop inclinations towards a multi-polar world order.

As a regional power, Turkey doubled its GDP while European countries could only grow by 30-40 percent between 1990-2010. Turkey's economic development brought self-confidence at political arena. Being more independent in economic terms can be evaluated as a supporting factor of Turkey's new foreign policy, which sometimes set Turkey and the US at odds in particular foreign policy issues. Moreover, despite being destined to EU

membership, Turkey has become less enthusiastic about European integration.[340] Because Turkey's relations with non-EU neighborhood brought considerable economic benefits, Turkey become more interested in developing special relations with other countries such as Russia and Iran. In short, Turkey's increasing economic prosperity may somehow draw the country apart from its traditional Cold War allies and thus may have an impact on the foreign policy of Turkey in a multi-polar structure.

Table 4.2. GDP Growth rate - Percent

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	1.86	NA	3.83	5.66	9.26	0.78	5.26	2.64	2.05
1991	-0.26	-5.00	9.20	0.42	0.93	-1.39	5.11	1.02	1.53
1992	3.41	-14.50	14.20	5.42	5.98	0.15	2.23	1.37	0.77
1993	2.87	-8.70	14.00	4.95	8.04	2.22	-0.80	-0.91	-0.89
1994	4.11	-12.70	13.10	7.46	-5.46	4.28	2.66	2.22	2.15
1995	2.55	-4.10	10.93	7.65	7.19	3.05	1.89	2.12	2.83
1996	3.79	-3.61	10.00	7.39	7.01	2.89	0.99	1.11	1.10
1997	4.51	1.38	9.30	4.48	7.53	3.31	1.80	2.24	1.87
1998	4.40	-5.34	7.80	5.99	3.09	3.61	2.03	3.50	1.40
1999	4.87	6.35	7.60	7.13	-3.37	3.47	2.01	3.30	1.46
2000	4.17	10.05	8.40	4.03	6.77	3.92	3.21	3.91	3.69
2001	1.09	5.09	8.31	5.22	-5.70	2.46	1.24	1.85	1.82
2002	1.83	4.74	9.10	3.77	6.16	2.10	0.00	1.03	0.45
2003	2.50	7.25	10.00	8.37	5.27	2.81	-0.22	1.09	-0.02
2004	3.58	7.15	10.10	8.30	9.36	2.95	1.21	2.47	1.53
2005	3.06	6.39	11.30	9.30	8.40	2.17	0.75	1.90	0.66
2006	2.67	7.68	12.70	9.44	6.89	2.79	3.37	2.22	2.04
2007	2.14	8.06	14.20	9.63	4.67	2.68	2.66	2.37	1.48
2008	0.42	5.62	9.60	5.12	0.66	-0.07	0.99	0.22	-1.32
2009	-2.63	-7.90	9.10	7.66	-4.69	-4.99	-4.72	-2.63	-5.04

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

Gross Domestic Product and growth rates of the major powers indicate a clear move to multi-polarity from an economic perspective. Particularly China emerges as the most prominent potential rival for the US in the future while Russia is recovering its position by the help of revenues from energy resources. However, another indicator is also important to evaluate the economic power struggle among international actors in the long-run. Table 4.3 shows GDP per capita of major powers and Turkey in last two decades. GDP per capita of these countries shows that the economic prosperity of the major powers is not parallel to the results of GDP growth. In other words, although Chinese economy grows incredibly, the people living in that country do not benefit much from that wealth when compared to

[340] Turkey's economic development is not the only factor decreasing Turkey's enthusiasm about EU. The constructed impediments against Turkey by Europeans is also shifting Turkey's inclination towards EU membership.

western world. India has also a similar problem. When combined with unequal income distribution, the lower level of GDP per capita may cause domestic political problems within a country. With such a problem, how long China can sustain balancing the US both in economic and military terms becomes an ambiguous question.

Table 4.3. GDP Per Capita GDP – US Dollar

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	22,580	3,846	361	379	3,611	17,692	21,584	21,342	19,886
1991	23,044	3,773	373	329	3,557	18,396	22,632	21,234	20,954
1992	24,106	3,298	434	324	3,682	18,969	25,648	23,326	22,169
1993	25,043	3,076	550	310	4,103	16,999	24,781	21,847	17,861
1994	26,298	2,743	495	348	2,919	18,323	26,400	22,991	18,426
1995	27,191	2,688	636	387	3,719	19,937	30,906	26,351	19,684
1996	28,401	2,644	742	401	3,918	20,955	29,797	26,314	22,034
1997	29,827	2,736	812	427	4,030	23,286	26,363	23,729	20,882
1998	31,098	1,835	854	422	4,181	24,878	26,639	24,423	21,339
1999	32,689	1,331	892	442	3,817	25,598	26,131	24,080	21,055
2000	34,390	1,771	958	449	4,011	25,082	23,152	21,830	19,213
2001	35,169	2,100	1,050	455	2,906	24,874	23,019	21,895	19,498
2002	36,020	2,377	1,151	468	3,400	27,142	24,528	23,663	21,168
2003	37,346	2,984	1,295	540	4,371	31,188	29,667	29,023	26,017
2004	39,398	4,113	1,512	642	5,582	36,734	33,323	33,012	29,642
2005	41,553	5,340	1,786	743	6,786	37,838	33,836	34,152	30,313
2006	43,626	6,942	2,142	824	7,365	40,349	35,423	35,836	31,592
2007	45,390	9,160	2,648	1,027	8,864	46,158	40,430	40,788	35,684
2008	46,105	11,794	3,360	1,085	9,881	43,401	44,181	44,639	38,532
2009	44,872	8,736	3,769	1,075	8,215	35,239	40,528	41,226	35,289

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

To sum up, although China, Russia and some other regional powers have considerable economic growth since the end of the Cold War, their current capabilities are still far from balancing the United States. The increasing economic success of these countries may help the system to evolve from uni-polarity to multi-polarity initially in economic terms. Economic multi-polarity may increase the tendency towards balancing in military sphere among other major powers. Therefore, energy resources are critically important for the shaping of international political system.

4.3. Energy Politics and Europe

In line with the changing perception of energy from an economic matter to a tool of foreign policy, major European powers have increased their attention on energy security as a result of the need to adopt themselves to the post Cold-War international structure as well

as the increased competition derived from industrially developing nations such as China and India. During the previous decade, the critical significance of energy security has been declared for many times both by government officials at member state level and by the Commission at Union level.

There are three main reasons for the increasing interest of major European powers on energy security, which are also related to the activities of other international actors. First of all, the invasions of Afghanistan and Iraq by the U.S. forces after the September 11 Events have a particular impact on European political elites. Deploying forces in Afghanistan and especially in Iraq could provide Americans an absolute control over most of the energy rich areas in Middle East, Persian Gulf and to some extent in Caspian. Otherwise, a rival power controlling that region would risk prosperity and global superiority of the U.S.[341] Although the transatlantic relations have always been cooperative than competitive, it would be unsafe to let any other international actor to control most of the energy resources that Europe may need in future. Furthermore, some of the European leaders have declared their anxiety about the increased unipolarity within the international system and American unilateralism.[342] Therefore, even if the United States has a long history of friendly relations with European powers, it may be a great risk if the energy resources that Europe needs are controlled by a non-European force. This should be read as a necessity for Europeans to defend themselves in case they lose the US protection rather than a power contest between the EU powers and the US. Put differently, if the multi-polarity goes beyond economic borders, and the other major powers such as China, Russia and/or India can engage balancing in military terms, the US may be less interested in military support for the EU and may concentrate on its own defense. In order to be ready for any contingency situation, EU should be ready to provide its own military and energy security. The initial steps by the well known 'Petersberg Tasks' and Union's decision to be able to deploy an EU force of 60,000 persons were all the examples of the structural impact on European decision makers.[343] The American leadership have also supported EU's endeavor for developing its

[341] Art, Robert, 2003, *A Grand Strategy for America,* Ithaca: Cornell University Press, pp. 45-64.
[342] German Chancellor Schröder and French President Chirac were the prominent figures questioning U.S. activities. See: Brooks and Wohlforth, 2005, *op-cit.,* pp. 93-103; Grant, Charles, 2003, "Defrosting the Entente Glaciale", *Centre for European Reform Bulletin,* Issue, 30.
[343] Treaty of Lisbon renamed ESDP as Common Security and Defence Policy and led to the termination of WEU by transfering its remaining activities to the EU. See: EU Common Security and Defence Policy:

capabilities.[344] Despite the existing Berlin-Plus agreement, the so-called 'chocolate mini-summit' in 2003 leaded by France and Germany about setting up a separate operational planning cell at Tervuren was evaluated as a starting point for a shift from tight Atlantic relationship in military planning. Moreover, Germany' and France's opposition to the US invasion of Iraq reinforced the American concerns.[345]

Secondly, Chinese aggressive search for energy resources has provoked Europeans to concentrate on energy security. China has continuously search for alternative energy sources and engaged special relationship with different countries from various parts of the world.[346] The interests of China contradict with the European plans for energy security. As a result, Chinese emerging activities in energy rich regions is another important reason for the current European interest on energy security. Last but not least, changing Russian behavior in supplying natural gas has been a critical point that draws the attention of public opinion in Europe. The Russians used natural gas supply as a foreign policy tool to enforce their policies on Ukraine[347]. They also follow a similar policy in their relations with Belarus.[348] The Russian notability as a reliable supplier during the previous decades was questioned by Europeans after those crisis in late 2000s. Therefore, the behaviors of other international powers in energy politics have a considerable affect on decisions and activity of Europeans in the energy field.

In short, since the end of the Cold War both sides of the Atlantic alliance enjoy freedom in shaping foreign policy as a result of the lack of 'common enemy'. Europeans support for US policies, thus, has become a factor of convergence among the interests of allies. The current international system increases anxiety of Europeans for being either entrapped or

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CSDP Newsletter, 2010, *Council of the European Union – EU Institute for Security Studies,* Issue 10, pp. 9-11.

[344] Hunter, Robert E., 2002, *The European Security and Defense Policy: NATO's Companion -or Competitor,* Santa Monica: RAND National Defense Research Institute, pp. *xv-xviii.*

[345] Larrabee, F. Stephen, 2009, "The United States and the Evolution of ESDP", in Vasconcelos, Alvaro de, *What ambitions for European defence in 2020?,* Paris: The European Union Institute for Security Studies, pp.51-2.

[346] Zweig, David and Jianhai, Bi, 2005, "China's Global Hunt for Energy", *Foreign Affairs,* Vol. 84, Iss.5, p.25.

[347] Simes, Dimitri K., 2009, "The Ukraine-Russia Energy Crisis", *The National Interest,* retrieved 20 September 2010 from http://nationalinterest.org/article/the-ukraine-russia-energy-crisis-2970.

[348] Slumbering energy conflict between Belarus and Russia, 2010, *Euroasia Energy Observer,* retrieved 20 September 2010 from http://www.eurasia-energy-observer.com/transneft-warns-belarus-of-possible-oil-supply-cuts.

abandoned. The easing of this tension requires an intensive diplomatic effort as well as bargaining which will enable allies to redefine their relations.[349] Since Europeans still feel this dilemma between entrapment and abandonment, and states rely mostly on their own power in order to survive in an anarchic world, European countries are naturally expected to find their own solutions for the energy question. European countries have certain alternatives which are geographically distributed around European continent. Some of these locations, i.e. Norwegian resources, can mainly be devoted to European countries while some others may be subject to a contest among energy importing countries. Therefore, this study follows a geographically-based analysis in order to investigate the relationship between energy and foreign policy behaviors of European actors.

In line with current situation, this chapter initially examines the potential sources of energy that may present the best solution to European energy security question. In this perspective, role of Russia requires a particular attention. Caspian and Middle Eastern countries also worth to consider as far as proximity and large resources of the region are considered. Moreover, they are also very important for Europe as a viable solution to the diversification problem. In each analysis of Europe's energy rich neighborhood, a closer look at the relations between European states and energy producing countries are also presented. In more concrete terms, the perception of Russian Federation by the bigger member states of the EU is analyzed after the evaluation of Russian resources. Similarly how Europeans perceive Iran, Middle East, and Caspian countries are also examined following the energy analysis of these regions.

In doing so, an analysis about energy politics should be conducted with respect to current unipolar structure and balancing efforts among the major great powers. Any discussions of policies of these actors without considering the policies of the leading power and other major powers at global level would be misleading. Since neo-realism envisages the system at the global scale and the imperatives of the international system are at work, the impact of other major actors on the formation of European energy policy should be taken into consideration. As a result, the policies of major international actors are also

[349] Ayman, Gülden, 2008, "Bir Güvenlik Sorunsalı Olarak Türk-Amerikan İlişkilerinde Irak Açmazı", in Ayman, Gülden (ed.), *Irak Açmazı: Türkiye Açısından Temel Parametreler,* İstanbul: Boğaziçi Üniversitesi – TÜSİAD Dış Politika Forumu, pp.55-6.

evaluated from the lenses of energy in the following pages of this study. Finally, the role of Turkey as a transit country between energy buyers and sellers is evaluated with respect to neo-realist explanation of international politics. The advantages and disadvantages of Turkey's strategic position for European energy security and in turn for achieving European global actorness, is evaluated from a neo-realist point of view.

4.4. Europe and Sources of Energy

As mentioned before, oil and gas are the two critical sources of energy for international actors. When compared to natural gas, oil is a more flexible resource because its trade is more convenient than gas. However, natural gas has recently become an important element of the energy mix of developed nations and it gained a critical role in energy politics of states. Therefore, securing natural gas reserves becomes more important than oil in the recent years. As far as natural gas is considered, most of European countries have traditionally been supplied by three main energy corridors. Northern Europe, Russia and North African producers have supplied almost all natural gas demand of Europe.

Norway has the leading supplier status among other European sources. Denmark, United Kingdom and the Netherlands have also considerable reserves, which other European countries benefit from. Having gigantic natural gas reserves, Russia had long been one of the most reliable suppliers of Europe at least for the last three decades. Last but not least, North African countries, mainly Algeria followed by Libya and at a lesser extend Nigeria have been the prominent suppliers of South European countries. All these energy-rich regions have already constituted 'the three main artery' of energy for the whole Europe. A closer look at these three corridors with reference to their importance for Europe may help us to understand the policies followed by major European states as well as other great powers such as China and U.S.

4.4.1. Northern Corridor

Norway is the most oil-and-gas-rich country in Europe with its huge offshore reserves in the North Sea, Norwegian Sea and Barents Sea. According to Energy Information Administration of the U.S., Norwegian proven gas reserves are more than 2200 billion cubic meters (bcm) as of 2009. The natural gas production of Norway in 2008 was almost

100 bcm.[350] With this current figure, Norwegian reserves will approximately end up in 22 years. Norway uses only 5 percent of its production in its domestic market and exports the rest to the European neighbors. Among the European customers of Norwegian gas, Germany and U.K. leads with shares of 32 and 31 percent respectively. France consumes 19 percent of Norwegian exports. Belgium and Netherlands also has a share of nearly 10 percent in Norwegian natural gas exports[351]. Table 4.1 shows the pipelines between Norway and the European countries including their length and capacities. It is clear that most of the pipelines from Norway are directed to Germany. Since the mid 1970s Germany and U.K. are the prominent consumers of Norwegian gas. Interestingly, the Europeans paid high attention to the North Sea gas during 1990s and constructed several pipelines. A few years ago, a new pipeline with a capacity equals to the quarter of Norwegian production level was constructed from North Sea to the Easington port in the U.K.[352]

Table 4.4. Main Export Gas Pipelines of Norway

Pipeline	Source	Destination	Length (km)	Capacity (bcm/year)	Date of Commissioning
Europipe I	North Sea	Dornum / Germany	670	18	1995
Europipe II	North Sea	Dornum / Germany	658	24	1999
Norpipe	North Sea	Emden / Germany	440	16	1977
Vesterled	North Sea	Scotland / U.K.	361	12	1978
Langeled	North Sea	Easington / U.K.	1166	25.5	2006
Franpipe	North Sea	Dinkirk / France	840	15	1998
Zeepipe	North Sea	Zeebrugge / Belgium	814	15	1993

Source: Table is composed by the author.

The informative data given above about the natural gas trade between Norway and other European countries may be evaluated from three aspects. First of all it shows that most of the leading European states engage in energy trade with Norway because it is the most convenient and most reliable energy source for the European countries. They consider that construction of new lines from Norway is worth to incur the costs of building those

[350] The Encyclopedia of Earth, 2009, "Energy Profile of Norway", retrived on 15 December 2009, from: http://www.eoearth.org/article/Energy_profile_of_Norway.
[351] GASSCO, 2009, "Norway's gas exports could top 100 bcm in 2008", retrieved on 15 December 2009, from: http://www.gassco.no/wps/wcm/connect/Gassco-EN/gassco/home/presse/ons2008/gasexports.
[352] GASSCO, 2009, "Transport System", retrieved on 15 December 2009, from: http://www.gassco.no/wps/wcm/connect/gassco-en/gassco/home/norsk-gass/gas-transport-system.

pipelines. For example, the cost of Langeled project for the U.K. was around 2 billion Euros. The incredible amounts that Europeans spent on these projects confirm the importance given to energy issues by member states.[353]

Secondly, gas imports from Norway clearly depict that member states are trying to guarantee their own energy security before considering a collective approach. Germany concluded, for example, Europipe II agreement which has a capacity to carry a quarter of Norwegian current annual gas to Germany's domestic grid. Similarly, France concluded another project with a pumping capacity of 15 percent of the current Norwegian gas to Dunkirk, where the Norwegian gas is distributed to national pipeline system of France. It is noteworthy that these projects are concluded nearly a decade later than the end of Cold War. The most recent example is the Langeled pipeline delivering natural gas to the U.K. The project started to operate in 2006, in a period that the Commission works hard for the deepening of the Community as well as to form a common energy policy. From a neo-realist point of view, these individual practices of member states may be evaluated as a precaution for the sake of their own energy security. The underlying motive for individualistic energy policies, moreover, may be regarded as a part of the expectations of those countries about international political structure. As long as those countries perceive a transformation to multi-polarity, they will be more inclined to develop their own capabilities. Because unbalanced multi-polarity is the least peaceful type of international structure, which poses greater threat to state survival.[354] In a world of unbalanced multi-polarity, the survival of an international actor will be in jeopardy unless that country possesses sufficient power and capabilities.

From this point of view, the policies and activities of member states about getting the Norwegian natural gas supplies completely confirm this individualistic approach rather than a pluralistic cooperative approach. If European countries had been more interested in cooperation and a common energy security objective, they would –for instance– form

[353] In fact, this amount is also important to make a comparison with the costs of pipelines planned to pass across Turkey. For instance, the cost of building Nabucco pipeline has been criticized among some leaders in Europe for several times. However, similar costs are easily accepted by major powers when the Norwegian gas is considered.

[354] For some different views on potential rivalry among Europeans, see Mearsheimer, 2001, *op-cit.,* p. 394; Layne, Christopher, 2003, *ibid.*, pp. 18-22.

energy supply areas which are distributed in terms of equity and efficiency. To state this in a different way, Germany is closer to the energy resources of Russia whereas U.K. is very far from Russian sources. Furthermore, they are equally distant from Norwegian sources. Therefore, instead of building the Europipe II, Germany would search for new pipelines from Russia and leave Norwegian gas for the use of United Kingdom or Belgium. Similarly, France would search for more Algerian gas and would not build a very long pipeline from North Sea to Dunkirk. This would not only provide an efficient sharing of energy resources but also help a considerable level of saving from the construction costs of the pipelines. Moreover, it would show the success of a unique energy policy properly functioning within the Union. However, –particularly the bigger– member states could not concentrate on a cooperation in energy security because their basic intrinsic motive of state survival have prevailed over their motivation for a cooperation[355]. This intrinsic logic of states is very clear indeed. Direct access to energy resources is a vitally important element of self-sufficiency which is an important element of internal efforts as described in neo-realism. European powers have behaved in line with neo-realist arguments and have tried to increase their own power because they may face to a rivalry for regional hegemony among major European powers. As neo-realists have argued, after U.S. forces withdraw from the European continent, there may probably be a contest for regional hegemony. Then, a balancing effort by the major powers of Europe may take place against the most powerful state. In that sense, energy resources controlled by a potential rival may have severe consequences and having direct access to those resources, thus, may be a matter of survival in an unbalanced multi-polar Europe. Thus, the systemic effects of international politics enforce European countries to behave in a selfish mode when primary national interests are at stake. In other words, major EU powers have preferred to guarantee necessary energy reserves in case of a change in power configuration at European or global level.

The activities of member states in energy field can also be read from the same point of view by examining some other examples. Britain, for instance, has recently developed a

[355] This is directly in conformity with the concept of relative gains. See: Grieco, 1988, *op-cit.,* 485-507. Even liberals accepts the impact of relative gains although they put annotation. See: Snidal, Duncan, 1991, "Relative Gains and the Pattern of International Cooperation", *American Political Science Review,* Vol.85, No:3, pp. 701-26.

project which will provide access to the Russian gas via Belgium and the Netherlands. The project costs 7.4 billion Euros and will have a capacity of 22 bcm per year[356]. The cost of a pipeline from Norway to U.K. equals only to one third of the cost of building a pipeline from Russia. Unfortunately however, most of the Norwegian gas has been shared by France and Germany. If Germany and France would divest themselves of their shares in Norwegian resources and let the U.K. benefit more from those fields, they could surely provide sufficient gas from Russian Federation and Algeria respectively. Furthermore, in any case of future gas shortages caused by a cut off from Russia or Algeria could be offset by using inter-connectors among the member states.[357] By this way, diversification of suppliers could be achieved at the Union level.

In practice, however, the member states have preferred to achieve diversification of gas suppliers by their own, which in turn results in more infrastructure costs. In addition, individual policies leave diversification question unresolved for some member states while some others enjoy great degree of energy security. Therefore, the 'self-help' oriented policies of member states towards Norwegian gas reserves confirm a neo-realist explanation of state behavior in an anarchic world order. This individualistic pattern of state behavior is in conformity with neo-realist explanation for the post-Cold War period. John J. Mearsheimer, for example, describes a multi-polar structure in Europe after the hegemonic impact of America ended:

> Without the American pacifier, Europe is not guaranteed to remain peaceful. Indeed, intense security competition among the great powers would likely ensure because, upon American withdrawal, Europe would go from benign bipolarity to unbalanced multi-polarity, the most dangerous kind of power structure. The United Kingdom, France, Italy, and Germany would have to build up their own military forces and provide for their own security. In effect, they would all become great powers, making Europe multi-polar and raising the ever-present possibility that they might fight among themselves. And Germany would probably become a potential hegemon and thus the main source of worry.[358]

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[356] Sullivan, Mike, 2009, "U.K. awaits Russian gas", *The Voice of Russia,* 2 December 2009, retrieved 12 December 2009 from http://english.ruvr.ru/2009/12/02/2474976.html.

[357] This is probably the main reason why European Commission continuously insists on developing the intra-community energy networks. For more information about Community policies, support and guidelines on Trans European Energy Network, see: http://ec.europa.eu/energy/infrastructure/index_en.htm.

[358] Mearsheimer, John J., 2001, "The Future of the American Pacifier", *Foreign Affairs*, Vol. 80, No: 5, September-October 2001, p. 52.

Mearsheimer's approach to European politics in the post-US hegemony entails completely military sentiments. In other words, Mearsheimer predicts a future political structure for Europe which is based on a power contest based on political and military capabilities. Although energy sounds like a concept related to economics rather than military issues, the current picture of energy politics in Europe may also fit to this explanation. As it was mentioned earlier, energy resources have become a function of foreign policy. Therefore, some of the specific energy policies of European major powers should be evaluated from the lenses of neo-realism because those energy policies have a direct effect on economic and military capabilities of actors. In line with this argument, two of the potential great powers in post U.S. hegemony Europe, namely Germany and France, have preferred to strengthen their own energy supplies by building new pipelines from Norway instead of leaving Norwegian resources to another major EU member: the United Kingdom. This seems complementary to Mearsheimer's explanation although energy policies do not entail an overt military purpose. Since U.K. might be another potential great power, which generally known for its close transatlantic ties, French and German policy makers do probably not totally trust the U.K. and did not prefer to leave Norwegian gas to U.K. By this way, they not only have provided energy security of their own country by diversification of suppliers, but also do not let the U.K. to be main beneficiary of the Norwegian gas.

Furthermore, Germany, for example, clearly puts forth an effort to get more shares from the Norwegian resources. German foreign policy makers are well aware of the fact that Britain's energy resources are rapidly exhausting and they are urgently in need of external resources. In that sense, Norway seems to be the most suitable source of energy for the U.K. However, Germany officially declared the importance of Norway for their energy security and defined Britain as a competitor for the Norwegian natural gas.[359]

A third aspect of Norwegian gas is about the profit of Norway from selling natural gas to other European countries. Norway does not prefer to become a member to the EU for a

[359] German-Norwegian energy partnership: a key component of Germany's external energy policy, 2009, *Auswärtiges Amt (Federal Foreign Office of Germany),* retrieved 12 December 2009 from http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/EnergieKlima/NorwegenEnergiepartnerschaft/Norwegen-energiepartnerschaft_node.html.

long time.[360] Norway defends the current institutional framework with centralized, government-controlled gas market and hesitates being opened to the impact of liberalization at the European gas markets. Particularly, the new European Union legislations on opening energy markets to competition would have negative consequences for Norwegian economy. In line with this policy, Norway has also engaged an activity of playing off buyers against each other in order to increase its profit from energy resources. New contracts with Czech Republic, Italy, Poland and even Spain show that Norway benefits from the policy divergences among member states.[361] From this point of view, Norway's energy policy may increase these divergences among member states in a future multi-polar Europe. In conformity with this arguement, Norwegians engage in energy trade with other major European countries. Despite the aggressive German and French interests on northern resources, Norwegian gas and oil reserves are closely followed by the United Kingdom and the Netherlands. As mentioned in the previous chapter, the U.K. was a self sufficient energy producer for a very long time. Thanks to the large coal reserves and North Sea oil and gas, U.K. was one of the few net energy exporting member states of the Union. By the 2000s, however, this trend has shifted due to the diminishing reserves in the North Sea fields of U.K. and increase in the domestic energy consumption. This dramatic decline in British reserves resulted in an increasing interest of the U.K. in Norwegian reserves. In 2004, U.K. became a net importer of natural gas and the British government proposed a plan for the Langeled pipeline project which connected Norwegian North Sea reserves to the U.K.'s national grid. This new pipeline with a capacity to transfer approximately a quarter of Norwegian annual production shows the ambition of British government in its gas competition with other continental powers.

In short, the leading energy consumers and potential great powers of the continent have recently been on the blink of an 'energy contract war' as far as Norwegian reserves are considered. Their ambition in increasing their share in northern resources confirms a neo-

[360] Norway refused EU membership for two times in 1972 and in 1994 after referendum. Some other reasons have also been mentioned as rejection, but protecting fishing and energy resources from European competition system seems to be the main two determinants for staying outside of the Union.

[361] For more detail about resources, historical development of Norwegian fields and policies and contracts between Norway and other countries, see Bartsch, Ulrich, 1999, "Norwegian Gas: The Struggle between Government Control and Market Development" in Mabro, Robert and Ian Whbrew-Bond (eds.), *Gas to Europe: The Strategies of Four Major Suppliers*, Oxford: Oxford University Press, pp. 201-253.

realist explanation about international politics. The gas competition shows the importance of energy resources in terms of power for states who have been in a process of cooperation for more than 50 years. Despite having a very long history of integration, they still engage in developing internal efforts at the regional level and try to improve their own capabilities even to the detriment of any common good of the other EU members. This situation, therefore, supports another neo-realist argument explained in Chapter 1. As Grieco stated, the possibility of cooperation in an anarchic political structure is limited to perceptions of their relative gains. States refrain from cooperation when they concern others will benefit more.[362] Unlike in other fields of European integration, member states failed to achieve a similar momentum of cooperation in energy area because they are not satisfied with absolute gains in energy cooperation. Relative gains of some member states may provide advantage which may cause serious weaknesses for others in a potential multi-polar world. Therefore, the relative vs. absolute gains concept introduced by neo-realism helps to explain the contest among major European powers in energy politics while they could have achieved considerable cooperation in other low-political issues. Since energy is directly related to military capabilities, it is regarded as a part of high-political issues.

In addition to regional balance of power, Norwegian resources are also important in terms of global balance. United States has started to import LNG from Norway in 2001 and the amount imported was doubled in 2009 when compared to a previous year.[363] Frankly speaking, it seems an insignificant indicator because the level of total LNG trade is quite low in percentage when United States gas imports or Norwegian gas exports are considered. However, it may be evaluated as an important signal from the U.S. to its European allies. American intrusion to the Norwegian gas market may cause concerns in Europe since European countries have perceived Norwegian resources as mainly dedicated to the use of continental powers. In that sense, after 2001, even distant rivals may be an alternative to Europeans. Yet, today the trivial amount of transatlantic LNG trade does not pose a great threat to security concerns of the EU members.

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[362] Grieco, 1988, *op-cit.,* p. 487.

[363] Norwegian Government Administration Services, 2004, "Sales of Norwegian Produced Petroleum", p. 43, retrieved on 25 May 2010, from http://www.regjeringen.no/upload/kilde/oed/bro/2004/0006/ddd/pdfv/204696-factsog0704.pdf; U.S. Energy Information Administration, 2010, U.S. Natural Gas Imports by Country, retrieved on 25 May 2010 from http://www.eia.doe.gov/dnav/ng/ng_move_impc_s1_a.htm.

In short, the Norwegian energy corridor explains very clearly that major European powers are well aware of several facts: (1) energy resources are becoming much more significant than being regarded as an economic commodity; (2) Norwegian resources are currently the most reliable energy resources for Europe and finally (3) getting the greatest share from Norwegian resources will be vitally important in a world where multi-polarity is the characteristic of system's structure.

4.4.2. North Africa: Southern Energy Corridor

As a second corridor providing natural gas to European energy grid, Algeria and Libya has a special importance particularly for the Mediterranean member states of the EU. Although geographically not located in North Africa, Nigeria can also be viewed in this category since the county provides significant amount of LNG to European countries. Among them, Algeria is the most important supplier though it ranks after Nigeria in terms of natural gas reserves in Africa. Algeria's importance is because of its proximity to the European continent. Algeria has more than 4.5 trillion cubic meters (tcm) of proven gas reserves, which represents the tenth largest natural gas reserves in the world. Algeria produced 84 bcm natural gas in 2008 and export more than 2/3 of that production to external markets. Most of this gas is exported to European countries via pipelines, which makes the country the fourth major supplier of Europe after Russia, Norway and the Netherlands.[364]

Libya, on the other hand, has lower natural gas reserves when compared to Algeria. However, Libya has the largest proven oil reserves in Africa. More than 80 percent of the oil Libya produced is transported to European countries leaded by Italy and Germany. Libya's natural gas reserves are expected to reach slightly above 1.5 tcm which is almost equal to Egypt in the region. Natural gas exports to Europe have grown considerably over the past five years through the 370-mile 'Greenstream' underwater natural gas pipeline from Melitah in Libya to Gela in Sicily, which carries 10 bcm annually.[365]

[364] Country Analysis Briefs: Algeria, U.S. Energy Information Administration, June 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Algeria/pdf.pdf., pp. 1-7.
[365] Country Analysis Briefs: Libya, U.S. Energy Information Administration, September 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Libya/pdf.pdf., pp. 1-8.

Finally, as one of the other major oil and gas producer in Africa, Nigeria can be evaluated as a part of this southern energy corridor to Europe. Nigerian natural gas reserves are expected to be more than 5.2 tcm, which is greater than Algerian reserves. Nigeria provides Europe 10 bcm of LNG annually, which has generally been destined to Spain, France and Portugal.[366] Although Nigeria has high energy reserves, certain security problems concerning the assaults on oil extraction and transportation possibilities and cost of transportation via tankers in the form of LNG decreases the importance of Nigeria as a reliable partner in solving the diversification problem of Europe.

In short, North African energy corridor in the south of Europe is an important source of energy since it helps the diversification problem and provides convenient and affordable natural gas. However, the resources are less than the necessary amount that Europe requires if the major continental powers expect a global role in a future multi-polar international structure. In other words, Europeans should continue to pay considerable attention on Africa, yet has to engage in other energy regions as well.

4.4.3. Russian Corridor

The situation of Russia as a supplier of natural gas is quite different from Norwegian corridor. In the case of Norway, the European powers have generally competed with each other for taking the highest part of the potential reserves. However, several other factors should be taken into consideration when Russian supplies are considered. First of all, it should be reminded that Russia is the primary gas supplier of Europe. Secondly, the continental countries are more dependent on Russian gas than Russia's dependence on the gas sales to the European customers. Furthermore, Russia is a great power with certain interests and expectations at foreign policy level which may necessitate cooperating with major European powers. Last but not least, Russia may have an indirect influence on Caspian region, which has long been regarded by the Europeans as an important source of alternative hydro-carbon energy. These factors generally shape the energy relations between Russia and Europe, therefore, a detailed analysis of this relationship is necessary for this study.

[366] Country Analysis Briefs: Nigeria, U.S. Energy Information Administration, July 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Nigeria/pdf.pdf., pp. 1-8.

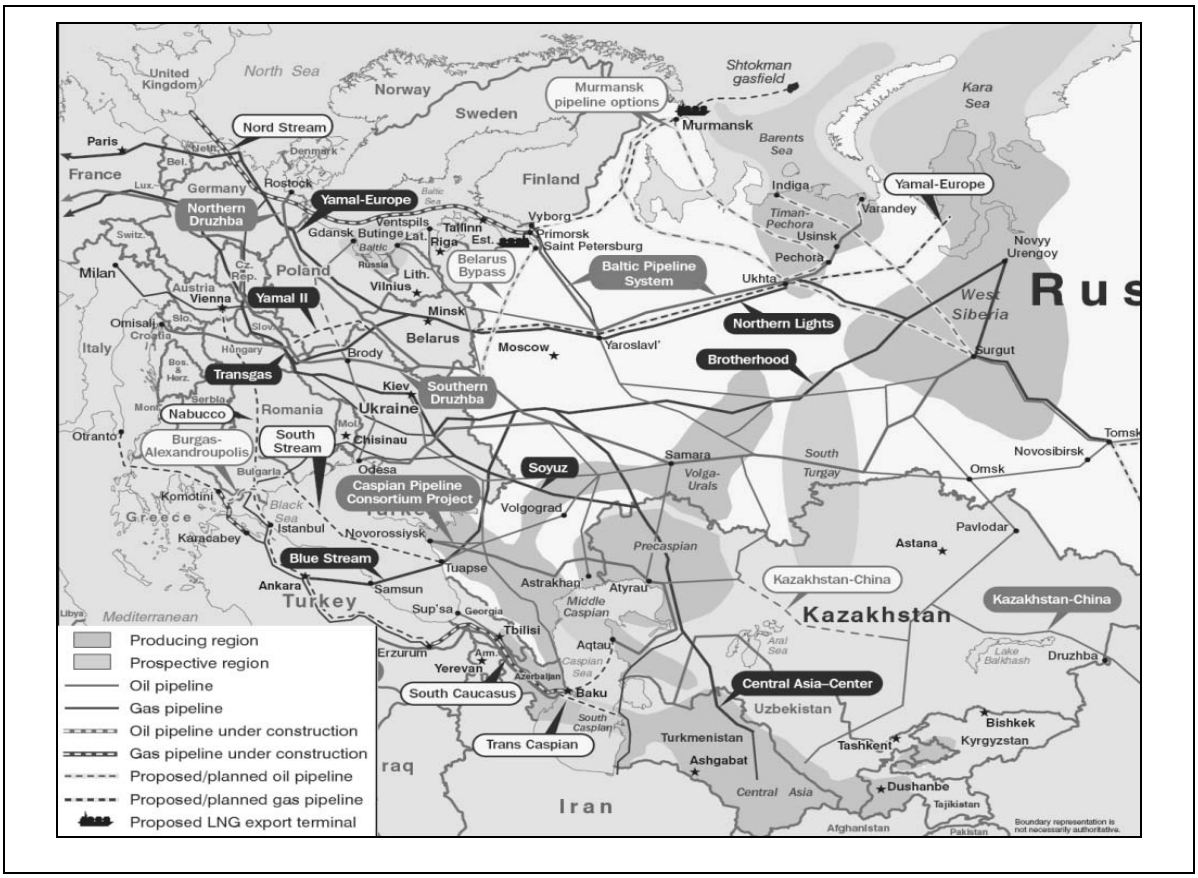
4.4.3.1. Russia: The Main Supplier of Europe

It is not plausible to investigate any policy behavior without taking Russia into account as far as energy resources are considered, because Russia holds the world's largest natural gas reserves, the second largest coal reserves and the eight largest oil reserves.[367] With almost 50,000 bcm capacity, Russian natural gas reserves are almost equal to the total of following two countries' reserves: Iran and Qatar.[368] With those gigantic reserves, Russia is the world's largest producer and exporter of natural gas as well. There are more than 75 gas fields in Russia with reserves over 100 bcm. The biggest one is Urengoy gas field with reserves equal to more than one-fifth of total natural gas reserves in Russia. As it is clearly shown in Map 4.1, most of the greatest natural gas fields of Russia are located in West Siberia Basin and arctic coast of Northern Russia. Urengoy and Yamburg gas fields which constitute more than one-third of the Russia's natural gas reserves are located within these regions. In addition, Barents Sea and Kara Sea are the most important offshore fields of Russia. Among these fields, Urengoy is the oldest field. It was discovered in 1966 and production started in 1978. Since 1984, Urengoy gas has been exported to Western Europe through the Urengoy–Pomary–Uzhgorod pipeline.[369] Also known as Trans-Siberian or Brotherhood pipeline, it runs from Siberia's Urengoy gas field to Uzhgorod in Western Ukraine. Then, it goes mainly through the Ukrainian border with Slovakia and to smaller pumping stations on the Hungarian and Romanian borders.[370] Therefore it has been the main 'gas vein' of Europe for a very long time. Northern Lights pipeline, also built in 1960s, carries natural gas from Urengoy gas fields to Northern Europe via Belarus. In addition to these earlier pipelines, new pipelines has been planned and built after the end of the Cold War. Particularly, Russian efforts to develop the reserves in Yamal peninsula have started in 1980s.[371] Yamal peninsula and the Barents Sea have become an important

[367] Russia: Background, 2009, U.S. Energy Information Administration, retrieved on 25 December 2009 from http://www.eia.doe.gov/cabs/Russia/Background.html.
[368] Worldwide look at reserves and production, 2007, *Oil & Gas Journal,* Vol. 105, No: 48, pp. 24-5.
[369] Wüst, Christian, 2007, "How Long Will Siberia's Gas Last?", *Der Spiegel,* 12.18.2007, retrieved on 15 September 2010 from http://www.spiegel.de/international/world/0,1518,524140,00.html.
[370] The Urengoy – Pomary – Uzhgorod Pipeline: a Cold War pipeline, *Pipelines International,* retrieved 15 September 2010 from http://pipelinesinternational.com/news/the_urengoy_pomary_uzhgorod_pipeline_a_cold_war_pipeline/043753/.
[371] Reagan Administration opposed strongly to this pipeline since it increased the dependence of European allies to Soviet Union even by sanctioning certain European companies. However, the Europeans were seriously concerned about their energy needs and concluded agreement with the Soviets despite the American

part of the Russian gas sector after 1990s. It is estimated that one third of the gas reserves of Russian federation is located in these areas.[372] Therefore, the current Russian development projects as well as future prospects are concentrated on the Yamal Peninsula and the Barents Sea. Yamal - Europe pipeline was built to export Yamal gas to Europe,

Map 4.1. Russian Natural Gas Fields and Pipelines to Europe



Source: Energy Information Administration, http://energy-eng.blogspot.com/2009_01_01_archive.html

which also connects to Urengoy gas in Ukhta. By this way, the amount transferred to Germany through Belarus-Polish corridor has reached to 33 bcm annually.[373]

The ownership of these gas pipelines should also be mentioned in order to make an analysis. According to EIA, "Kremlin policy makers continue to exhibit an inclination to

efforts. See, Lewis, Paul, 1982, "U.S. asks its allies to deny the Soviet parts for pipeline", *The New York Times,* January 11, 1982, Section A, p.1, c.4.

[372] Yamal Megaproject, *Gazprom, retrieved* 15 September 2010 from http://gazprom.com/production/projects/mega-yamal/.

[373] Yamal-Europe, *Gazprom*, retrieved 15 September 2010 from http://gazprom.com/production/projects/pipelines/yamal-evropa/.

advance the state's influence in the energy sector."[374] All of the Russian fields are owned and all the pipelines are operated by Gasprom. Moreover, taxes on oil exports and extraction are high, and Russia's state-influenced oil and gas companies continuously works for obtaining the controlling stakes in most of the previously foreign-led projects.[375]

With the immense capacity of natural gas production and ownership of routes to Europe, Russia has become the most important energy provider of European countries. As it was clearly depicted in detail in Chapter 2, almost all major powers in Europe are dependent on Russian gas. Furthermore, most of the Central and Eastern European Countries are almost totally dependent on Russian natural gas. From this point of view, an unexpected shortage would cause very serious consequences for the European countries as the cases of Ukraine and Belarus have clearly shown. In turn, the Russian economy has also benefitted much from natural gas sales to Russia. Therefore, there is interdependency between Europe and Russia. In order to overcome further disruptions caused by transit countries, Russia agreed to build Nord Stream Pipeline directly goes to Germany under Baltic Sea at a cost of 7.4 billion Euros[376]. However, the Europeans are more vulnerable in this relationship since Russians can find alternative buyers such as China and/or India while Europeans cannot easily find an alternative to Russia.

Despite having various alternative oil producers, Russia has also been the main oil supplier of the continental Europe. Druzhba (Friendship) Pipeline carries 1.4 million barrels per day from Eastern Russia and Siberia to Belarus, Poland and Germany in the

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[374] Russia: Background, *op-cit.*

[375] Depsite the privitization efforts during Borris Yeltsin's Presidency, government control over this gigantic company reaffirmed by the Putin reforms in 2000-2003. See Pala, Cenk, 'Ayı ile dans: Kutsal Gazprom İmparatorluğu ve Türkiye' in Tanyeri, Süha (ed.), *Dördüncü Uluslararası Sempozyum Bildirileri: Güvenliğin Yeni Boyutları ve Uluslararası Örgütler*, Ankara: Genelkurmay Askeri Tarih ve Stratejik Etüt Başkanlığı Yayınları, pp. 12-8.

[376] This amount only covers the offshore part of the project. There are also onshore costs which covers the construction on Russian and German territories, which is estimated to total around 6 billion Euros. See: Dempsey, Judy, 23 August 2007, "Gazprom plans to re-route controversial European pipeline", *The New York Times, retrieved on 17 March 2010 from http://www.nytimes.com/2007/08/23/world/europe/23iht-pipeline.4.7231553.html?_r=1.* Moreover, there are discussions about an increase in the costs of the project by 1.4 billion Euros. See: Nord Stream More Expensive, *Barents Observer,* retrieved on 17 March 2010 from: http://www.barentsobserver.com/nord-stream-more-expensive.4760460-116321.html. The constructing company on the other hand, refuses these arguments and expected the costs to be as planned before. See: Nord Stream Project's Cost Remain 7.4 Billion Euros, *Nord Stream,* retrieved on 17 March 2010 from: http://www.nord-stream.com/en/press0/press-releases/press-release/article/nord-streams-project-costs-remain-74-billion-euros.html?tx_ttnews[backPid]=1&cHash=cf362f2cf9.

north. This pipeline carries oil to Ukraine, Hungary, Slovakia and Czech Republic in the south as well.[377] Russian ports in Primorsk near St. Petersburg and Novorossiysk in the Black Sea are also important oil transfer points to Europe.[378] In short, although not being as much decisive as in the case of natural gas, Russia is also an important source of imported oil for Europe. In such an extensive relationship, European countries are highly dependent on Russia as far as energy supplies are considered. On the other hand, Russia is also dependent on European buyers particularly in natural gas sales. Therefore, before a structural analysis of interdependency, the alternatives of both consumer side and supplier side should be clearly examined in order to understand the how fragile the parties are.

4.4.3.2. Alternative Destinations for Russia to Export Energy Resources

It is very clear that the European Union and Russia are extremely interdependent with respect to their energy trade.[379] As Walt argues, "the end of Cold War altered many key features of world politics, but it did not affect the essential nature of the international system"[380], which is characterized by a condition of anarchy. Moreover, "each state has a different endowment of resources, a unique geographic location, and its own particular history, each inevitably has somewhat different preferences on most issues"[381]. Under these conditions, being highly dependent on another country is not something desirable for a state in an anarchic world order. In more concrete words, major EU powers may find it undesirable to rely heavily on Russian energy sources because Russia may change its policy towards European countries based on its own interests. Similarly, Russians may not prefer to be so much dependent on the sales to European markets and may prefer finding new energy markets for their gas and oil. There are some alternatives both for Russia and Europe in order to alleviate the pressures that the energy interdependence put on them.

As for the Russian side, the growing economies of China and India emerge as new energy markets. The Chinese efforts to meet the growing energy demand include energy

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[377] Druzhba Pipeline, *2009, Pipelines International,* retrieved 17 March 2010 from http://pipelinesinternational.com/news/druzhba_pipeline/008045/.
[378] Oil exports, 2009, U.S. Energy Information Administration, retrieved on 25 December 2009 from http://www.eia.doe.gov/emeu/cabs/Russia/Oil_exports.html.
[379] Borisocheva, Ksenia, 2007, *Analysis of Oil-and Gas-Pipeline-Links between EU and Russia*
[380] Walt, 2005, pp. 71-3.
[381] *Ibid.*, pp. 71-3.

cooperation with major suppliers. China is also investing heavily in Russian energy assets.[382] Russia accounts for about 10 percent of Chinese oil imports, which is largely sent by railway transportation. The current amount of China's natural gas imports from Russia, on the other hand, is very trivial.[383] In line with the growing relations between the two former communist countries, some analysts expect a growing energy relationship between these two major powers as well.[384]

From a neo-realist point of view, the slowly growing relations can be understandable. Since these two major powers have a long border, they may be more anxious about each other's intentions and therefore reluctant to engage in a high level of cooperation. Since the American power is an offshore threat for both Russia and China, developing relations cautiously with closer rivals may be more important than balancing the United States. As some analysts argue "major Eurasian powers will be too busy competing against each other to worry about the United States, and will want to enlist it as an ally against their regional rivals".[385] In line with this argument, Downs contented that "Russia became increasingly reluctant to commit to deeper energy integration with its neighbor to the south in large part because of the intersection of fears about China's rise with the role that energy exports play in Russian foreign policy and domestic politics."[386] Russia's move to change route of the Eastern Siberia – Pacific Ocean pipeline to end in Russia's eastern coasts is in conformity with this argument. That pipeline was originally agreed between Russia and China to end in Daqing in China. However, Russia preferred not to direct those resources solely to use of China.[387] From this point of view, Sino-Russia cooperation may require

[382] The China National Petroleum Corporation (CNPC) has recently announced its investment of $500 million in Rosneft, Russia's leading Oil Company. See, John, Mary, 2006, "Russia-China Energy Cooperation", *Frost & Sullivan,* retrieved on 25 May 2010 from http://www.frost.com/prod/servlet/cif-econ-insight.pag?docid=76385988.

[383] In 2006, Chinese officials signed a Memorandum of Understanding (MOU) with Russia's Gazprom for two pipeline proposals that could send natural gas supplies from Russia's Far East in the next decade. See, China: Natural Gas, 2009, *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/China/NaturalGas.html.

[384] Ferdinand, Peter, 2007, "Sunset, sunrise: China and Russia Construct a new relationship", *International Affairs,* Vol. 83, No:5, pp.841-867.

[385] Layne, Christopher, Layne, Christopher, 2006, "The Unipolar Illusion Revisited: The Coming End of the United States' Unipolar Moment", *International Security,* Vol. 31, No:2., p.22.

[386] Downs, Erica S, 2010, "Sino-Russian Energy Relations An Uncertain Courtship," in James Bellacqua (ed), *The Future of. China-Russia Relations*, Lexington: The University Press of Kentucky, pp. 146-7.

[387] Sevastyanov, Sergei, 2005, ""The Russian Far East's Security Perspective: Interplay of Internal and External Challenges and Opportunities", *Slavic Research Center,* Proceedings of the Conference: Siberia and the Russian Far East in the 21st Century: Partners in the 'Community of Asia', Sapporo, pp. 27-9.

much time and effort to develop into an intensive cooperation level. In other words, China may not easily substitute European countries in terms of energy partnership.

Furthermore, to build new infrastructure to China may cost so much that Russia may refrain from spending that amount of investment. Considering the Russia's problems in extracting new energy fields in Northern Siberia and Yamal Peninsula because of the necessary investment required for production, it may be irrational to build long pipelines to Chinese border. Therefore, China may hardly become an alternative for European gas market from the Russian perspective.

Another alternative of Russia to export natural gas may be India. However, the natural gas relations with India are not as promising as trade with China because Indian plans for future gas imports are based on two main other producers: Iran and Turkmenistan. As for the Iranian gas, the security of route passing through Pakistan is a serious concern for Indian authorities. In addition to this, the price of the natural gas may be an important impediment against a deal between these two countries. Similar security concerns are also relevant for Turkmen gas since the pipeline will pass over Afghanistan and Pakistan. Moreover, the adequacy of Turkmen gas for the Indian market is another question that New Delhi concerns with.[388] In light of this, Russia may still rise as an alternative to Indian market. However, the main problem is that Russia has no border with India and the pipeline should pass some other countries. Such a project may not only cause an extra transportation cost, but also entails several security problems similar to the crisis between Russia and Ukraine. Furthermore, the construction cost of such a project is also dissuasive for both countries. Therefore, as a potential buyer of Russian natural gas, India seems to have even less probability than China.

As the relations between Russia and its southern neighbors in Asia confirm, Europe still emerges as the best and most reliable partner for Russia's enormous energy trade. In addition to the economic benefits of this trade, from a system level analysis, it can be argued that both Russia and European major powers may also have a chance to balance the American power by improving their energy relationship in the near future.

[388] India: Natural Gas, 2009, *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/India/NaturalGas.html.

4.4.3.3. Europe's Alternative Energy Resources to Russia

The European Union members have also some alternatives to Russia in order to provide hydro-carbon energy resources. Actually, alternative import routes cannot totally substitute Russian resources, yet they may only help to decrease the level of dependency on that country. From this point of view, North Africa, the Middle East and Caspian Basin emerge as alternative regions for Russian energy supplies. Currently, European countries, particularly southern countries have a possibility of direct access to North African resources as mentioned before. Unfortunately, the North African reserves are not enough to feed the energy requirement of central European countries. Access to natural gas produced in other parts of the world in form of LNG, on the other hand, is not very feasible due to cost of transportation and process of gasification and liquefaction.

As for the Middle East and Caspian Basin, the European countries have important trade relations as far as oil is considered. However, these two regions have also significant natural gas reserves. For example, South Pars region, which is the second largest natural gas field in the world, is located between Iran and Qatar with considerably high offshore reserves in the Persian Gulf.[389] In addition, Saudi Arabia and Iraq have also considerable level of natural gas reserves which may be transferred to Europe either via pipelines or in the form of LNG.[390] In addition to reserves in the Middle East, Caspian Basin is also considered as an important source of energy.[391] The level of total oil reserves in the Caspian region is expected to be equal or more than the North Sea reserves. Natural gas reserves, on the other hand, are expected to be around 5 percent of total global gas

[389] World Energy Outlook, 2008, *Head of Communication and Information Office,* Paris: International Energy Agency, p.298.
[390] EIA, 2009, "Saudi Arabia: Natural Gas", *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/Saudi_Arabia/NaturalGas.html; [390] EIA, 2009, "Iraq: Natural Gas", *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/Iraq/NaturalGas.html.
[391] According to the International Energy Administration, the region has a total of 125 million toe of oil as well as 147 million toe of natural gas production. See 2007 Energy Balance for Caspian Region, *International Energy Administration,* retrieved on May 21, 2010 from http://www.iea.org/stats/balancetable.asp?COUNTRY_ CODE=32.

reserves. In other words, most of the major powers are interested in Caspian region because of the huge reserves of gas and oil.[392]

However, current development efforts in Caspian countries are mainly faced with two serious difficulties: Firstly, the production of oil and gas resources is naturally subject to the availability of transportation facilities. Since Caspian region is a landlocked area, pipelines constitute indispensable part of the production. However, the old Soviet infrastructure is not capable and reliable for carrying natural gas to Europe. Furthermore, building new pipelines requires huge amount of capital as well as a consensus among many different parties including states, multinational corporations and even individuals. Second difficulty against the Caspian development efforts is the legal status of the Caspian Sea. Littoral states still cannot agree on the status of Caspian Sea which inhibits the resource development efforts.[393] Without providing an agreement among Iran, Russia, Turkmenistan, Kazakhstan and Azerbaijan, it will not be possible to present Caspian energy resources to the world markets.

4.4.3.4. Energy Dependence of Europe on Russia and its Consequences

As it is figured out above, European countries are highly dependent on Russian energy resources. There are alternatives for decreasing the level of dependency, yet it is almost impossible to substitute Russia with any alternative energy rich region. From this point of view, European countries should follow stable relations with their eastern neighbor. However, it will not be an exaggerated argument to label the European-Russian energy relationship as a process of mutual-interdepence.[394] Russia would hardly find an alternative

[392] For U.S. and U.K.'s official reports about the reserves in Caspian basin, see Gelb, Bernard A., 2006, "Caspian Oil and Gas: Production and Prospects", Congressional Research Service Reports for Congress, Washington D.C.: The Library of Congress; Winstone, Ruth and Young, Ross, 2005, "The Caspian Basin, energy reserves and potential conflict", Research Paper 5/24, London: House of Commons Library.

[393] For a detailed analysis of the problems between the Caspian states, see Mahnovski, Sergej, 2009, "Natural Resources and Potential Conflict in the Caspian Sea Region", in Oliker, Olga and Szayna, Thomas S., *Faultlines of Conflict in Central Asia and the South Caucasus,* Pittsburg: Rand, pp. 109-144.

[394] Mutual interdependence is not used as defined by interdepence liberalist writers. For example, some liberal scholars argued that states become more preoccupied with low political issues in complex interdependence and transnational actors are becoming more important. See: Nye, Joseph, 1993, *Understanding International Conflicts,* New York: Harper Collins, pp. 169-70; Keohane, R.O. and Nye, J.S., 1977, *Power and Interdependence: World Politics in Transition,* Boston: Little Brown, pp. 24-7. However, the mutual interdependence in energy between European countries and Russia shows a different feature. Russia does not have a very transparent administration as described in liberal thinking. Therefore, the interdependency between Russia and Europe is mainly limited to energy fields.

to Europe for its natural gas production as defined above. However, it is clear that the destructive impact of any energy crisis between Russia and Europe would be greater on European people than its impact on Russia's economy.

A systemic analysis of this dependency relationship between European countries and Russia may help to understand the policies of these countries. First of all, one should always remember that both Russia and major European powers are potential great powers that may turn into rivals against each other in the future. This does not only mean that Europeans may conflict with Russians, but there may be internal conflict among European Union members. Therefore, the relationship among these powers will always include suspicion and unreliability. In other words, anarchy is a persistent condition that cannot be transcended, and states are in a perpetual struggle for controlling over territory and getting the maximum portion of scarce resources.[395] This systemic pressure clearly shows the limits of cooperation between great powers. As long as their interests are not conflicted great powers may cooperate at a certain extent. The energy cooperation between Russia and European powers, thus, is a result of the systemic pressure. As explained in Chapter I, great powers are expected to engage in balancing against an aspiring hegemon and try to limit its military and economic capabilities.[396] In line with this argument, it can be asserted that the increasing U.S. hegemony[397] within the international political system requires others to take precautions for defending themselves against any potential hegemonic threat.[398] From this point of view, Europe's increasing cooperation with Russia may be evaluated as a part of this intrinsic balancing behavior against American dominance. Former Russian President Putin openly argued the need for multi-polarity for several times and it is argued that the former superpower has been seeking for a grand Euroasian alliance

[395] Schweller, Randall L (1999)., "Realism and the Present Great Power System: Growth and Positional Conflict Over Scarce Resources", in Kapstein, Ethan B and Mastanduno, Michael (eds.), New York: Colombia University Press, pp. 28-30.
[396] Levy, Jack S., 2004, "Why Do Great Powers Balance Against ana When?" in Paul V.T, Wirtz, James J. and Fortmann, Michel, *Balance of Power: Theory and Practice in the 21st Century*, Stanford: Stanford University Press, pp. 38-9.
[397] Although the US implements unilateral policies that may help to construct a hegemony in international system. However, being the most powerful actor does not entail being the hegemon since others do not comply with all the US decisions and there are economic shortfalls of the US that may jeopardize its strength. See: Ayman, 2008, p.55.
[398] There was a solid enemy during the Cold-War. In the current structure, on the other hand, there is no precise criteria to distinguish opponents from allies. See: Ayman, Gülden S., 2007, "Turkish-American Relations and the Future of Iraq", *Private View*, No:12, p. 66.

against U.S. unipolarity.[399] Therefore, Russia should be evaluated as a country which is trying to balance the hegemon in a modest way. From this point of view, developing special relations in energy field with a country which depicts balancing efforts may also be evaluated as a support for balancing. Put differently, European efforts to develop special relations with Russia in energy field may help Russia in its balancing efforts. However, it is not very simple to determine whether European countries support Russia's balancing efforts or not.

In order to make an accurate analysis, it may be helpful to examine whether Europeans conduct special relations with Russia in spite of a clear opposition from the U.S., or not. In other words, if Europeans insist on intensive relationship with Russia while the United States suggests Europeans certain alternatives to Russian natural gas and oil, then this would be regarded as a hidden support for Russia's balancing efforts. In contrast, if the U.S. does not present any alternative to Russian resources, European efforts to develop special energy relations with Russia may be evaluated as a solution to the obvious need for energy resources. In that sense, the United States has not put a viable alternative energy resource that Europe may resort for decreasing the energy dependency on Russia. There are several potential areas that the U.S. may present Europeans as alternative energy resources, yet U.S. is not so eager to let Europeans directly benefit from those resources.

Firstly, Iraq has considerable gas fields both in the north and south of the country.[400] Although the current level of Iraqi gas is not as promising to become an alternative to Russia by its own, it would help Europe to be less dependent on Russia. Although some of the European based energy companies try to operate in Iraqi fields[401], most of the Iraqi oil and gas resources are controlled by the companies from other countries. Very recently, new contracts are signed with companies from Kuwait, Turkey and Korea for the

[399] Wohlforth, William, 2004, "Russia's Soft Balancing Act" in Ellings, Richard J., Friedberg, Aaron L. and Wills, Michael, *Strategic Asia 2003-04: Fragility and Crisis*, Seattle: National Bureau of Asian Research, pp. 165-8.

[400] The estimated natural gas reserves of Iraq is slightly more than 3 trillion cubic meters and Irak ranks 10th at worldwide as far as largest natural gas reserves are considered. See: Iraq: Natural Gas, 2010, US Energy Information Administration, retrieved on 26 September 2010 from http://www.eia.doe.gov/cabs/Iraq/NaturalGas.html.

[401] Royal Dutch Shell, BP, Total of France and ENI of Italy have particular attention on Iraqi natural gas. However, they are in strict competition from Asian and American companies. See: Hafidh, Hassan, 2010, "Iraq Plans New Licensing Auction for 3 Gas Fields", *Rigzone,* retrieved 25 June 2010 from http://www.rigzone.com/news/article.asp?a_id=91047.

Mansouriya and Siba gas fields.[402] Secondly, Iran would present a competitive alternative to Russian gas as far as South Pars fields are considered. However, the hard political stance of the United States against Iranian uranium enrichment crisis has urged Europeans to act prudently in developing energy cooperation with Iran. Instead of easing the sanctions, the major EU countries accompany the United States in implementing more sanctions on Iran which may shift the interest of that country to expand its energy ties with Asian countries such as India, China, Japan and Korea.[403] Therefore, strict U.S. policy towards Iran, which pressures Europeans to prefer a hands-off attitude in relations with Iran, compels major European countries to develop special energy relations with Russia.

From this point of view, European preference of rapprochement with Russia in energy issues does not totally confirm the idea of balancing the United States. However, it may also include sentiments of a support for balancing effort. It is even very hard to evaluate European behavior as simply a search of energy security, support to balancing or directly engaging balancing the U.S. power. If the United States followed a constructive policy towards Iran or if the European companies would find more chance in Iraq, major European powers would be less enthusiastic in engaging special relations with Russia.

On the other hand, high-level energy relationship may be a planned consequence of European balancing efforts against the tremendous power of the U.S. Some scholars argue that the second-tier major powers such as European powers, China, India and Russia are already trying to balance the uncontrolled U.S. power in the unipolar world order. In more concrete terms, there are some views that some major powers are currently engage in classic balancing while some other political scientists insist on a new type of balancing as a result of the power gap between the U.S. and others. Some others, on the other hand, argue that the current structure does not let any other power to challenge the U.S. position.[404] In line with these discussions, it can be clearly argued that increasing energy relations with

[402] Ajrash, Kadhim and Razzouk, Nayla, 2010, "Iraq Signs Natural Gas Contracts With Foreign Partners", *Bloomberg Businessweek*, retrieved 14 November 2010 from http://www.businessweek.com/news/2010-11-14/iraq-signs-natural-gas-contracts-with-foreign-partners.html.
[403] Afrasiabi, Kaveh L., 2010, "Europe's Iran sanctions may backfire", *Asia Times,* retrieved on 28 July 2010 from http://www.atimes.com/atimes/Middle_East/LG28Ak01.html.
[404] The newly developed soft balancing concept explains certain behaviors of major powers which entails contradicting policies to the interests of the US. For a detailed analysis of the arguments on balancing, see: Paul T.V., *op-cit.,* pp. 46-71*;* Pape, *op-cit.,* pp.7-45; Art, Robert, et-al., *op-cit.,* pp. 177-196; Brooks and Wohlforth, *op-cit.,* pp. 72-108; Lieber and Alexander, *op-cit.,* 109-139.

Russia is necessary to be relieved from U.S. control. The efforts within the ESDP[405] have been evaluated as a balancing effort through external alignment. Put differently, integrating resources and developing an EU level military structure with the capability of deploying 60,000 troops[406] are important elements of greater defense autonomy which confirm balancing. "A European Union that can act autonomously in its own region and that can provide for its own security is an EU that will be less under the United States' thumb and more capable of influencing Washington across a certain range of issues"[407]. These European efforts complicates transatlantic relations in several ways which gives more agenda-setting power to Europeans. This is not welcomed by the U.S. because it will decrease the ability of U.S. to influence over Europe.[408]

Christopher Layne also puts forward a similar argument. The U.S. may try to shape international atmosphere according to its own interests while curbing other's freedom of action and disregarding their interests. Washington may implement such a policy "especially in regions like Middle East-Persian Gulf where interest of the United States and the second-tier major powers could diverge … The second-tier major powers have strong motivations to engage in semi-hard balancing by building up their own military capabilities"[409]. Art explains the reasons under European balancing behavior with two main factors: Firstly there is an imbalance between the European countries and the United States. Secondly, the European foreign policy has become less relevant to the U.S. foreign policy when compared to the Cold War years.[410] To sum up, the diverging interests of the U.S. and major European powers result in a different mode of transatlantic relations when compared to the Cold-War period. Hard balancing, soft balancing, opaque balancing or semi-hard balancing are some of the labels given by the political scientists. Whatever the name of this new type of behavior, there is a reflexive policy against the American policies in Europe. Therefore, the energy policies at European level should also be considered from

[405] For a detailed study of ESDP development from the view of both politicians and experts, see: Gnesotto, Nicole, 2004, *EU Security and Defense Policy: The First Five Years (1999-2004),* Paris: Institute for Security Studies.
[406] *Ibid.,* p. 179.
[407] Art, *op-cit.*, p. 182.
[408] Posen, Barry R., 2004, "ESDP and the Structure of World Power", *International Spectator,* Vol. 39, No: 1, pp. 15-17.
[409] Layne, Christopher, 2006, *The Peace of Illusions: American Grand Strategy from 1940 to the Present,* Ithaca: Cornell University Press, pp. 146-7.
[410] Art, *op-cit.,* p. 183.

a similar point of view. In other words, European powers do not want to be dependent on any other international actor as far as energy resources are considered. This is the same for what Europeans do in foreign policy. They try to improve their own military resources in order to be relieved from U.S. dominance in security issues. Europeans have initially begun to improve their capabilities under ESDP, which is the most tangible achievement of the military dimension of European integration since the failure of European Defence Community in 1952[411]. The current ESDP achievements have also been perceived differently even among Europeans. Some believe that European security is directly related to Atlantic Alliance and regard the European efforts as redundant while 'continental' view argued that the current military activism of the European integration process is inadequate[412]. It is clear that some of the European countries are severely searching for more freedom in military security.[413] Similarly, Europeans want to be free in energy issues. Moreover, improving relations with Russia may also be regarded as cooperation with other major powers in order to strengthen collective position against the dominance of hegemonic superpower. Therefore, European rapprochement with Russia in energy issues may be evaluated as a part of a soft balancing effort of the continental powers against their Cold-War protector.

However, having intensified energy relations with Russia does not practically mean relying totally on Russian resources because Russia is also not a reliable partner for the Europeans. Since state behaviors are affected from relative positions of the others, it is not logical to trust any other international actor. Balancing behavior is not something peculiar to be implemented solely against the hegemon; there may be several simultaneous regional balancing efforts among medium and small powers.[414] Therefore, as the United States pursues unilateralist strategies to prevent the rise of a peer competitor, other major powers

[411] Teixeira, Nuno Severiano, 2009, "European defence: a future challange", in Vasconcelos, Alvaro de, *What ambitions for European defence in 2020?,* Paris: The European Union Institute for Security Studies, pp.143-4.
[412] *Ibid.,*pp.145-6.
[413] Since the late 1990s, European efforts to have a special military force have worried many American officials for making NATO obsolete. 1999 Helsinki Summit of the EU temporarily defused US concerns by degrading EU forces to NATO by confirming that the Union would only act if NATO decided not to take part as a whole. This declaration "diminished – but did not entirely eliminate – the US fear that ESDP might develop as a rival to NATO. "In the eyes of some US officials, France appeared to have moved from being a cantankerous ally to an outright opponent of US policy." See: Larabbe, *op-cit.,* pp.51-2.
[414] Art, *op-cit..,* p. 184.

normally pursue strategies any other major power to advance in a position of a superpower[415]. Put differently, relying excessively on Russian resources may turn Europe heavily dependent on Russia while Europeans try to relieve from American hegemony. That is why European Commission continuously stresses on the importance of diversification of resources and remarks often on the increasing dependence on Russian gas. In a future multi-polar international structure, major European powers should expect to be independent both from U.S. and Russia in terms of military and energy in order to feel completely secure. As Art explains "balancing has to begin somewhere over something, and balancing takes time, especially when the state against which it is directed has generally been viewed as a benign force and when its edge is so great"[416]. Therefore, it is not so weird to argue that Europe may also be trying to balance Russia as well as the United States. Major European powers support NATO's enlargement eagerly, which shows that European's are not happy with a Russian sphere of influence over the eastern neighborhood of EU territory.[417]

From this perspective, the way European powers evaluate Russia's intentions for engaging in more intensive relations with Europe is also important. First of all, Europeans are already aware of the fact that Europe is the best option of Russia as a market for its natural resources. Its proximity, high consumption level and the ability to pay makes Europe the viable option among others. Russia, on the other hand, does not have a very industrially developed economy except for the trade of natural resources.[418] However, economic sides of certain issues are not the main concern of states for most of the time. Politics generally prevails over economics particularly when energy security issues are considered. The construction of BTC pipeline is the most prominent example of this. From this point of view, political side of the issue is more important than economic aspect of selling energy to Europe for Russia. Therefore, Russia probably perceives Europe as a tool for balancing the U.S. unipolarity. Actually, Russian policy to dominate European energy market may be read from this perspective. By controlling the energy market of Europe, Russia seeks the ability to enforce European governments to engage in balancing in a

[415] Paul, *op-cit.*, p. 46.
[416] Art, *op-cit.* p. 185.
[417] A New Balance in Europe, *The Economist,* 19.11.2009, retrieved 13.02.2011 from http://www.economist.com/node/14915170.
[418] Babalı, Tuncay, 2009, "Turkey at the Energy Crossroads", *Middle East Quarterly,* Vol.16, Iss.2, pp. 27-8.

stronger manner. Being aware of this fact, both the European Commission and member states are in search for alternative energy resources that may help to decrease their dependency on Russian resources. This shows that Europeans are not willing to engage in a traditional balancing against the United States.

On the other hand, the U.S. is aware of the balancing efforts of other major powers. Even though the U.S. has almost all the means that can help to tackle other powers in most of the conflicting issues, the superpower still concerns about preventing the rise of a peer competitor.[419] Particularly growing Chinese economy and resurgence of Russia are probably the main threat perceived by the superpower in current unipolar structure. Certain hegemonic policies, especially with respect to the Middle East and Central Asia, have made some foreign governments anxious. Russia has always perceived Central Asia as its backyard. Therefore, the former superpower does not like U.S. policies in this region. As explained above, United States' traditional allies in Europe are also among those uneasy governments about invasion of Iraq.[420] In such an intricate atmosphere, major European countries have developed a strategic move as a new foreign policy in the new international structure, which includes certain degree of balancing behavior. All European powers, but primarily Germany as the most powerful one, have urged to develop strategic partnership with Russia, which was also mentioned in EU strategy papers for many times.[421] Nevertheless, there is also a tendency to keep Russia at a distance. Put differently, Europeans have drawn their energy policies in line with this new foreign policy, which help them to become more independent at the great energy game.

Paradoxically, the EU members have also engaged a similar balance of power strategy within their internal relations. As explained both in first chapter and the previous parts of this chapter, the internal struggle among EU members to access more energy resources is also a regional balancing behavior. In line with this behavior, member states depict different foreign policies at a certain extend. A group of member states leaded by Germany give importance to develop special relations with Iran. On the other hand, having a strong nuclear infrastructure, France has more space than Germany in energy policy decisions and

[419] Paul, *op-cit.,* p. 46-8.
[420] Art, *op-cit.,* pp. 177-185.
[421] Joetze, Günter, 2006, "Pan-European Stability: Still a Key Task?" in Maull, Hanns W. (ed.), *Germany's Uncertain Power: Foreign Policy of the Berlin Republic,* New York: Palgrave Macmillan, pp. 152-165.

puts more distance to its relations with Iran[422]. Even though they have diverging policies, a common concern for Europe is the lack of energy resources and access to secure energy with affordable prices.

As a consequence, Europe has mainly two alternatives for solving the energy security problem. Firstly, Europe should invest more on renewable energy resources. Secondly, European countries have to deal with other regions which have huge energy deposits. As for the former, Europeans need time and investment to achieve a certain level of contribution to energy requirement. Renewable energy resources are highly critical for the future. However, they are unfortunately not enough to be relieved from the structural pressures of international system. In other words, Europeans have to find new routes that may become alternative to Russian natural gas. Being aware of this fact, EU Commission and member states show their enthusiasm for developing special interest in Caspian and Central Asia. Moreover, they are also interested in Middle East at a lesser extent. There may be two main reasons for paying less attention to the Middle East countries when compared to the Central Asia and the Caspian. First of all, the U.S. has deep interests in this region and the Europeans may not desire any clash of interests with the sole superpower of unipolar world. Secondly, the Middle East is a very difficult region in terms of security. To engage severe commitments in such a war prone region could harm European energy security much more than the current status. Europeans, furthermore, do not have necessary military capability in order to engage even peacekeeping operations in the Middle East while the U.S. have already embarked on wars against Afghanistan and Iraq. Despite the difficulties of the region Europeans still show enthusiasm for energy trade with the regional powers.

The current energy structure defined above clearly indicates, the existing three energy corridors are vitally important for Europe, but insufficient. European countries should open a new energy corridor in order to provide energy security. This has been labeled as forth

[422] The recent project of construction of a new missile defence system under the aucpices of NATO to protect Europe from the threat of a nuclear attack clearly shows French position. In contrast to Turkey's efforts for not directly mentioning Iran as a threat, French president stressed the Iranian uranium enrichment process as a direct threat to Europen security. See: Catty Remarks on Iran chill mood between Turkish PM, French Leader, 22 November 2010, *Hurriyet Daily News,* retrieved 25 November 2010 from http://www.hurriyetdailynews.com/n.php?n=erdogan-continues-row-over-sarkozy8217s-8220cat8221-definition-for-iran-2010-11-22.

corridor[423], which is expected to connect Europe to the resources in Caspian, Central Asia, Iran, the Middle East and eastern parts of the North Africa.

4.4.4. The Fourth Corridor

The fourth corridor concept has been developed long time ago, but the relative significance of this energy corridor has become a subject of discussion particularly after Russia's policy towards Belarus and Ukraine in mid-2000s. European countries have already known the fact that North Sea and Norwegian Sea reserves are in decline and they have shifted their attention on other resources. They mainly concentrated on developing special relations with Russia. However, it was not until Russia used energy policy as a tool of aggressive foreign policy that Europeans have given a special importance to this fourth or as it is also named as southern corridor, which is expected to connect the Caspian, Gulf regions and the Middle East to European energy network. This has also been identified by the European Commission in the framework of the Trans-European energy networks (TEN-E).[424]

There are certain problems with respect to development efforts in Caspian, Persian Gulf and Middle East region. The least problematic among them is the Caspian because the littoral states have already engaged development efforts within their undisputed territorial waters and on the onshore areas. Among them, Azerbaijan has started to pump oil and gas via BTC and BTE pipelines. As of January 2010, Azerbaijan's proven oil reserves are estimated at 7-9 billion barrels which approximately equals to 1-1,25 billion tones of oil. Today Azerbaijan exports more than 40 million tons of oil annually through pipelines to world markets. Almost 80 percent of Azerbaijan's production comes from Azeri Chirag Guneshli (ACG) fields in Caspian offshore sites of the country and around 90 percent of this oil is transferred through BTC pipeline.[425] Azerbaijan has also produced natural gas from the same ACG and Shah Deniz fields. Azerbajian's total annual natural gas

[423] Energy Corridors: The European Union and Neighbouring Countries, 2007, *European Commission Directorate for Research,* Luxembourg: Office for Official Publications of the European Communities, pp. 22-6.
[424] Report From Commission to the European Parliament, the Council, The European Economic and Social Committee, and the Committee of the Regions on the Implementation of the Trans-European Energy Networks in the Period 2007-2009, 04.05.2010, COM(2010)203final, *European Commission,* Brussels.
[425] Azerbaijan: Oil, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Azerbaijan/Oil.html.

production is 16.5 bcm, 10.5 bcm of which is consumed in internal energy market. Most of the rest is exported to Turkey via South Caucasus Pipeline (BTE). Only less than one sixth of the Azeri gas exports are transferred to Russia and Iran through Gazi-Magomed-Mozdok and Baku-Astara pipelines respectively. Before the extraction in Shah Deniz, Azerbaijan was a net importer of natural gas. In 2006 production started and Azerbaijan has become one of the important natural gas producers in the region. It is estimated that Azerbaijan has roughly 990 bcm of natural gas reserves, which lasts more than 60 years with the current production level.[426]

Turkmenistan is another energy rich country particularly with large natural gas reserves. Annual Turkmen oil production level is slightly less than 10 million tons of oil, which is equal to only a quarter of Azeri production. With 600 million tons of oil, the proven reserves of Turkmenistan are also less than Azerbaijan. On the other hand, Turkmenistan has considerable level of natural gas reserves. Although the annual production level changes because of the lack of infrastructure and extraction capabilities, the country has around 2.6 tcm of natural gas reserves.[427]

Another major oil and gas producing actor in the region is Kazakhstan with 30 billion barrels of reserves which equals to more than 4 billion tons of oil. This means that Kazakh oil fields are four times greater than Azeri reserves. Interestingly slightly more than half of the oil reserves in Kazakhstan are located in onshore fields such as Tengiz, Karachaganak and Aktobe. The Kashagan and Kurmangazy offshore fields have also large reserves. As a result of having large onshore reserves, unlike other littoral states, Kazakh government has the ability to produce more oil without considering the problem of the status of Caspian. Currently, Kazakhstan produces 80 million tons of oil annually. The internal consumption is one-sixth of the production while the rest is exported through pipelines to the ports in Black Sea via Russian territory. Kazakh oil is also transported by tankers and pipeline to Mediterranean via Azerbaijan and Turkey. Kazakhstan also sells certain amount of oil to China through pipelines, which constitutes 1/8 of the current production. When the production starts in Kashagan field, which is estimated to be the largest oil field outside the

[426] Azerbaijan: Natural Gas, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Azerbaijan/NaturalGas.html.
[427] Turkmenistan Eneregy Profile, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=TX.

Middle East, the current oil production will at least expected to double in 2020.[428] Kazakhstan has also significant amount of natural gas reserves, which is almost equal to 2,4 tcm. In other words, although less than Turkmenistan's reserves, Kazakhstan has great natural gas fields which is expected to be exported sooner than Turkmenistan. The Karachaganak gas field, which constitutes almost half of the total Kazakh reserves, provides more than half of the current production level of the country. As of 2008, the natural gas production of Kazakhstan is about 30 bcm which is expected to double before 2015 due to the construction of new development facilities as well as export pipeline routes. In that sense, Kazakhstan currently has two main pipeline routes, one to the west, the other to the south. Central Asia Centre pipeline carries Kazakh production to the Russian border and feeds the Russian natural gas grid. The newly designed Central Asia Gas Pipeline crosses at the southern border of Kazakhstan and carries Turkmen, Uzbek and Kazakh gas to Xinjiang in Chinese border. This new pipeline has a capacity to carry 40 bcm annually, which is expected to realize at the end of 2014.[429]

All these three Caspian countries have significant amount of hydro-carbon resources. Particularly they have almost 6 tcm of natural gas which cannot be neglected in an age of energy war. However, as the current figures shows, there are alternative buyers who are willing to purchase the natural gas produced in the Caspian region. Put differently, Europe should not view Caspian basin resources as taken for granted since there are competitors such as China and Russia. From this point of view, other energy producers who have sufficient resources should be taken into consideration in order to help the fourth corridor to function properly and efficiently. Among these alternative actors, Iran takes precedence over all others because of its gigantic reserves in the South Pars region.

With the gigantic oil and gas reserves, Iran should be regarded as an indispensable element of European energy security. Iran is the second largest oil producer and fourth largest oil exporter in the world. The country has almost 10 percent of the world's total oil reserves that equals to slightly more than 18 billion tons of oil reserves, most of which is located in Iraqi borders of the country. This is important because proximity to Europe is an

[428] Kazakhstan: Oil, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Kazakhstan/Oil.html.
[429] Kazakhstan: Natural Gas, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Kazakhstan/NaturalGas.html.

advantage. Iran's total annual production is about 200 million tons which is almost five times greater than Azerbaijani oil production. Despite its large reserves and proximity to Europe, more than half of the Iranian oil is destined to Japan, China, India and South Korea.[430] As in the case of oil, Iran has the second largest natural gas reserves in the world. It is estimated that Iran has 30 tcm natural gas dispersed mostly in the western costs of the country, such as: South and north Pars, Kish, Kangan-Nar. More than two-thirds of the gas, on the other hand, is non-associated and have not been developed yet.[431] In other words, these resources will be an important element of a future energy competition between major powers. Iran produces more than 110 bcm natural gas annually and consumes more than that amount, most of which is used in re-injection in oil development industry, heating and energy production.[432] Currently, Iranian buy-back regime makes it very costly for foreign operators to engage in Iranian gas fields.[433] Together with these development problems, Iran does not have sufficient infrastructure for transporting its natural gas reserves. The Iran-Turkey Pipeline is the most prominent export route which has a capacity to transfer 14 bcm annually. Other than this line, integrating an Iranian part to Nabucco and a proposed India-Pakistan-India pipeline are also important projects that may help Iran to export natural gas in the future.[434] However, the Indian position in project is not very clear since India has political problems with neighboring Pakistan.[435] Whatever the current Indian decision is, Iranian oil and gas will always attract the countries in the sub-continent. In

[430] Country Analysis Briefs: Iran, 2010, *US Energy Information Administration,* retrieved on 25.11.2010 from: http://www.eia.doe.gov/emeu/cabs/Iran/pdf.pdf , pp. 1-7.
[431] *Ibid.,* pp. 7-9.
[432] Iran exports natural gas to Turkey and imports from Turkmenistan and Azerbaijan. Latest cuts in gas supply to Turkey from Iran were related to the increasing demand in Iranian domestic market due to hard winter conditions. See: Cold halts Iran gas exports to Turkey, 8 February 2008, Reuters, retrieved 25.11. 2010 from: http://uk.reuters.com/article/idUKL0881580820080208.
[433] Iran enforces foreign investors to sell the gas the operator produced to the national gas company of Iran and then that national company sells this gas with a profit again to the same producer, which is naturally not very profitable for the operating company. See: Townsend, David, 2001, "The buy-back debate", *Petroleum Economist,* Vol.68, Iss.9, pp.26-7.
[434] With an envisaged capacity of 55 bcm annually, such a pipeline would be decisive in determining how future Iranian gas will be shared. See: Haider, Zeeshan, 2010, "Pakistan, Iran sign deal on natural gas pipeline", *Reuters,* retrieved on 25.11.2010 from http://uk.reuters.com/article/idUSTRE62G12C20100317?sp=true.
[435] This also confirms the central question of this study. As a result of structural pressure on India, the Indian foreign policy makers perceived it unsafe to rely on Pakistan since they are competing major powers in the same region. Giving the energy card to Pakistan would harm the foreign policy of India. See: India has Quit Iran gas pipeline deal, 2009, *The Times of India,* Retrieved on 25.11.2010 from http://timesofindia.indiatimes.com/news/business/international-business/India-has-quit-Iran-gas-pipeline-deal-Report/articleshow/4980241.cms.

short, Iranian resources should be clearly evaluated by the European powers if they really want to assume a great power status in the post unipolar world order.

Together with Iran, Qatar is the other partner of South Pars field[436], which contributes these two countries to possess the second and third largest gas reserves in the world, respectively. Put differently, Qatar has more than 25 tcm of natural gas reserves, while oil reserves of the country is not so promising. When compared with other Gulf countries, Qatar's oil fields are very trivial.[437] However, Qatar produced 76 bcm in 2008 which is five times higher than 1995. With this figure, Qatar may also become an important part of European energy security together with Iran. Qatar exports natural gas generally in the form of LNG. Among the LNG trade partners South Korea, Japan and India ranks among first three. Among major European powers, only Spain has a considerable level of LNG trade with Qatar.[438] Having tremendous gas resources, Qatar should not be disregarded by the European countries since they are trying to diversify their energy suppliers.

Another important country of the Middle East is Iraq, which has also had very rich oil and gas resources since the early 20th century. The estimated Iraqi proven oil reserves is around 15,5 billion tons, which may go up to 28 billion tons of oil when the unexplored western and southern deserts are considered. Therefore, today Iraq has the fourth largest oil reserves, but may become the second after Saudi Arabia if the under-developed regions are carefully explored. In 2009, Iraqi oil production was 120 million tons, which is a relatively restricted production level.[439] There are two main reasons of below-capacity production: Firstly, the war in Iraq destroyed most of the production and transportation facilities. Secondly, the distribution of resources after American invasion causes many disputes among the groups living in Iraq. Most of the oil reserves in Iraq are located in Basra and Kirkuk regions, in other words south and north of Iraq respectively. Basra has the greatest share in oil reserves with 60 percent of all Iraqi reserves. Together with Mesan and Nasiriya, the reserves of southern provinces reach up to 70 percent of the total Iraqi oil

[436] Qatari government calls South Pars as North Field.
[437] Qatar's oil production is around 45 million tons of oil. For oil production in Qatar, see: Country Analysis Briefs: Qatar, *US Energy Information Administration,* December 2009, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Qatar/pdf.pdf, pp. 1-4.
[438] *Ibid.* pp. 5-9.
[439] Country Analysis Briefs: Iraq, *US Energy Information Administration,* September 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Iraq/pdf.pdf, pp. 1-4.

reserves. In other words, most of the Iraqi oil is produced in the south and transferred through tankers. Almost all the rest of the proven reserves are located in northern part of Iraq. Kirkuk and some other fields in the north have around 13 percent of the total reserves while the Kurdish regions under the control of Kurdish Regional Government has slightly more than 3 percent of the total Iraqi oil reserves.[440] Most of the oil produced in Iraq is transferred to Asia while Europe only receives 20 percent of Iraqi oil[441]. This clearly shows that Europeans are not very active in Iraq, which has vitally important oil reserves. However, as in all other regional actors, the natural gas resources of Iraq are more important than oil for Europe.[442] Therefore, by actively working on Iraqi natural gas, Europeans may provide leverage against other competitors who are more active in developing Iraqi oil. Although incomparable to the reserves in Russia, Iran or Qatar, with 3.2 tcm proven reserves of natural gas, Iraq can help Europe's efforts to diversify energy resources.

On the other hand, some analysts argue that Iraqi reserves may be increased to 8.5 tcm if necessary investment is provided. As in the case of Iraqi oil reserves, approximately 70 percent of the Iraqi gas lies in the Basra province.[443] The rest of the gas, on the other hand, is located in the northern Iraq. In other words, more than 1000 bcm gas would be available to European network via Turkey with a very low cost. Building a 250 km pipeline to Turkey from Northern Iraq would solve contribute European efforts to solve the energy security question in a very short period of time. Later, the rest of the Iraqi gas would also be attached by internal pipeline system in Iraq.

Besides the gigantic reserves in the Iran, Qatar and Iraq, there are also crucial natural gas reserves in Saudi Arabia and Egypt. Saudi Arabia is expected to have the fourth largest natural gas reserves in the world with its 7.3 tcm natural gas reserves. Saudi Aramco argues that the amount is close to 8 tcm. The ambiguity is a result of insufficient natural

[440] Al-Mahaidi, Kamil, 2006, Geographial Distribution of Iraqi Oil Fields and its Relations with the New Constitution, *Revenue Watch Institute,* retrieved on 25.11.2010 from www.iraqrevenuewatch.org/reports/052706.pdf, pp. 1-7.
[441] Country Analysis Briefs: Iraq, *op-cit.,* p. 5.
[442] As mentioned before, oil is a much more tradable commodity than gas. Securing gas is very critical, and oil can be secured relatively easily if the buyer has enough economic resources.
[443] Country Analysis Briefs: Iraq, *op-cit.,* p.6-7.

gas exploration efforts in the country.[444] However, linking the gas fields to the pipelines in Iraqi territory which will connect to the pipeline in Turkey would easily bring Saudi Arabia's reserves to the use of European consumers. From this point of view, Saudi Arabia is not negligible. Similarly, Egypt is another gas producer that Europe can benefit from. Egypt has considerably lower natural gas potential with reserves of 1.65 tcm. As a result of the rapidly developing gas sector in Egypt, the annual production is reached to 56 bcm annually which is far greater than Azerbaijan.[445] Although half of it is consumed in internal market, the rest would be transferred to Europe with linking the country to European grids via Jordan, Syria and Turkey.

To sum up, the neighboring countries to Turkey in various regions have great energy resources that may solve Europe's energy dispute. The common point of these resource rich countries is that the best alternative route for their energy trade with Europe passes through Turkish territory. Since oil is a more flexible product than natural gas in terms of transportation and trade, it is difficult to argue that Turkey presents the best alternative route for oil.[446] However, for the optimum transportation of natural gas, pipelines are critical. Pipelines, on the other hand, are strategic decisions that do not let to change the trading partners once it is built. In other terms, when a pipeline is built the seller does not have any option to shift to any other alternative customer, and vice-versa. Therefore in such a critical decision, European countries are aware of the fact that the regions surrounding Turkey is full of oil and gas resources, which could be destined to European consumers. In the Caspian, Azerbaijan, Turkmenistan and Kazakhstan are the most probable sources with around 1000, 2600 and 2400 bcm of natural gas, respectively. In the Middle East and Gulf region, Iran and Qatar presents huge reserves with a total of 55000 bcm, which may help a real solution to the dependency problem of the major European powers. With reserves of at least 3.2, 7.5 and 1.6 tcm, Iraq, Saudi Arabia and Egypt may also contribute to European energy question by linking these resources to a major pipeline going from the region to Europe. All these reserves may be helpful for Europe to solve the energy problem, yet there are certain problems.

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[444] Country Analysis Briefs: Saudi Arabia, *US Energy Information Administration,* November 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Saudi_Arabia/pdf.pdf, pp.12-13.
[445] Country Analysis Briefs: Egypt, *US Energy Information Administration,* June 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Saudi_Arabia/pdf.pdf, pp.4-5.
[446] Turkey can present the best route even for oil particularly for the land locked Caspian countries.

First of all, these resources are not taken for granted and requires these countries to be convinced. Since there are other alternative buyers such as Russia, India, China or other South East Asian countries, it will not be easy to persuade those countries. In addition, the Europeans need to be certain on a specific route for the pipeline(s) which will carry these resources to the continent. As in most of the energy related issues, Europeans do not have a consensus among the Union members about the necessity of these resources. To sum up, whatever the decisions of major European countries are, the producers surrounding Turkey presents a total of at least 63 tcm of natual gas. This amount is highly sufficient to meet the annual natural gas consumption of OECD Europe, which is roughly equal to 560 bcm.[447]

4.5. Turkey's Contribution to European Energy Policies

As explained above, European countries have several alternatives to Russian gas in order to alleviate the dependency on that country. Among others the main alternative is the so called fourth corridor, namely Caspian Basin, Central Asia, Gulf regions and the Middle East, which are all in Turkey's neighborhood. As a candidate country for EU membership, therefore, Turkey has been regarded as an important hub or transit country between these energy resources and Europe. A lot of projects, including the frequently mentioned Nabucco, have been developed in order to stress Turkey's role in energy policy.[448] In that sense, Turkey is perceived not only as an alternative route for reaching oil and gas resources but also as an element for strengthening the ability of European states to bargain with Gazprom.[449] In other words, European powers cannot ignore Russia totally, but should prevent the energy giant from using energy as a tool of foreign policy.

On the other hand, some other experts argued that North African resources will become a real alternative to Russian gas, while Caspian resources will only play an indirect role for European gas supply.[450] However, the figures given above clearly confirms that the fourth corridor is not only necessary for providing resources to Europe, but also for limiting other

[447] International Energy Outlook 2010, *US Energy Information Administartion,* retrieved 26.11.2010 from http://www.eia.doe.gov/oiaf/ieo/nat_gas.html.
[448] Roberts, John, 2004, *The Turkish Gate: Energy Transit and Security Issues*, Centre for European Policy Studies, EU-Turkey Working Papers No: 11, Brussels: CEPS.
[449] Götz, Roland, 2007, *Russian Gas and European Energy Security*, Stiftung Wissenschaft und Politik Research Paper No: 10, Berlin: SWP, pp. 10-1.
[450] Winchester, Robert F., 2007, European Energy Security: Wrestling the Russian Bear for Caspian Natural Gas, Carlisle Barracks: U.S. Army War College.

major powers to access those resources which are steadily becoming an important element of power at international system.

Turkey's role should not be evaluated solely as a geographical location in between the departure and arrival stations of oil and gas, but rather it should be evaluated with respect to a systemic analysis of international politics. In light of the structural theory, the perspectives of other major powers should also be attached into an analysis of these energy rich regions. In more concrete terms, American foreign policy with respect to Caspian, Iran and Middle East should be included in the analysis as well as Russian and Chinese policies. Therefore, in the following part of this study, a structural analysis of Turkey's role is presented with reference to major power's policies in those regions.

As mentioned in Chapter III, the Turkish energy grid is rapidly improving and is expected to be filled with Caspian and Middle East resources to transport natural gas and oil to Europe. The construction of Baku-Tbilisi-Erzurum pipeline is the most prominent example of Turkey's willingness. The pipeline initially transports Azerbaijani gas to Turkey, then to Europe via existing pipelines. The following stage for that project is to carry other Caspian resources from Turkmenistan and Kazakhstan through a trans-Caspian pipeline to Europe by linking Nabucco pipeline to the existing system. However, Caspian resources may not be sufficient to implement huge pipeline projects. Therefore, apart from Caspian resources, Iranian and Middle East reserves should also be linked to the Turkish energy grid destined for Europe. Each of these energy rich regions should be evaluated separately in detail as well as foreign policy considerations of major powers on these particular areas.

4.5.1. Caspian Basin and Central Asia

As previously stated, natural gas and oil reserves of the region are seriously considered as important sources of energy by the great powers.[451] Since Caspian Sea is a landlocked area, there are not so many alternative ways to export the energy resources to the world markets. For the European energy markets, on the other hand, two alternatives emerge as viable transport routes: Turkey or Russia. Iran may also be perceived as an alternative

[451] Most of the reports prepared by major power governments declare the importance of Caspian resources. See Gelb, 2006 and Winston and Young, 2005.

route as far as oil transportation is considered.[452] However, the existing pipelines passing through Russia and Turkey decrease the probability of an Iranian alternative. Moreover, the recent debates between Russia and other transit countries negatively affected Russia's reliability in the eyes of Europeans. As a result, Turkey seems the most reliable alternative for linking European energy market to Caspian basin resources.[453]

The economic feasibility of routes passing through Turkey, on the other hand, is not sufficient to guarantee Caspian oil and gas for European markets. The economics is only one side of the coin. The political perceptions of great powers have also played an important role in shaping the energy relations between Europe and the Caspian States.

First of all, Russian policy towards the region is an important element effecting Caspian energy issues. Except for Iran, all of the Caspian countries were former Soviet Republics. Russia has always inclined to perceive the region as its backyard and has begun to follow an interventionist policy in its relations with the Caspian states since the end of Cold War.[454] Under 'Euroasianist' Russian Prime Minister Yevgeny Primakov's term, Russian interests in Central Asia renewed. Russia, furthermore, intensified its interest in this region after involvement of American military operations in some Central Asian States.[455] The Russian strategy has changed into a cooperative policy in line with the principle of solidarity against the fight of international terrorism. After the initial support in U.S. fight against Taliban in Afghanistan, however, Russian policy makers preferred to go on with more involvement in Central Asian politics. Particularly after the U.S. invasion of Iraq in 2003, Moscow "tried to project Russia's image as a traditionally reliable partner for the quasi-autocratic Central Asian leaders"[456]. Russia has been interested in the region for several reasons: First of all, instability in the region would pose a direct threat to Moscow. Secondly, unrestricted rights of transit are necessary to improve cooperation with China,

[452] Alternative Iranian route requires transporting oil via tankers from its ports in Persian Gulf. However, it is not feasible to carry natural gas by the same way because of the high cost of liquification process.
[453] Oktay, Ertan and Çamkıran, R.F., "Avrupa Birliği'nin Enerji Güvenliği Açısından Türkiye'nin Önemi", *Marmara Journal of European Studies,* Vol.:14, No:1, pp. 153-173.
[454] Kubicek, Paul, 1997, "Nationalism and Realpolitik in Central Asia", *Europe-Asia Studies,* Vol. 49, No: 4, pp. 651-2.
[455] Freire, M.R., 2009, "Russian Policy in Central Asia: Supporting, Balancing, Coercing, or Imposing?", *Asian Perspective,* Vol. 33, No:2, p. 131.
[456] Allison, Roy, 2004, "Strategic Reassertion in Russia's Central Asia Policy", *International Affairs,* Vol. 80, No:2, pp. 279-80.

India and Iran. Thirdly, Russia has economic benefits from those countries not only with regards to their rich underground resources, but also as a market for several Russian industries. Finally, geostrategic potential of the region in military terms is necessary for Russia to preserve its great power status.[457] In order to improve those interests in the region, Russia has sought developing intense relations with the current leading elite as well as engaging security cooperation with those countries.

In addition to use positive tools, Russia has also resorted stick in certain cases. In that sense, Russia's use of energy issues as a tool of foreign policy is also obvious in its relations with some of the Caspian countries. As one of the substantial sources of natural gas in Soviet period, Turkmenistan could not be able to freely export its gas to world markets because the country became a competitor to Russia. Since the country had only one export option over Russian territory, they were restricted with the limitation policies of Gazprom. Being aware of this power, Russia tried to control Turkmenistan's gas production until a new pipeline built from Turkmenistan to Iran.[458]

After 2002, Russian President Putin tried to form various multilateral or bilateral military agreements with Central Asian leaders and to revive Russia's military and security influence in the region, which was deteriorated after September 11.[459] Collective Security Organization Treaty is one of the most prominent examples of this strategy in 2002. It is followed by the inauguration of a new air base at Kant in Kyrgyzstan in late 2003. On the other hand, Russia's influence on some other regional countries is not so promising. Uzbekistan, for instance, has developed military and security assistance programmes with the United States after September 2001.[460] The case of Uzbekistan is important because it may confirm that there is a contest between major powers in the region. When the Uzbeks asked U.S. to leave the air bases on their territory, Russia took the chance through Shangai Cooperation Organization and also by offering bilateral agreements to Uzbekistan. The

[457] Trofimov, Dmitry, 2003, "Russia and United States in Central Asia: problems, prospects and interests", *Central Asia and the Caucasus*, Vol. 19, No:1, p. 76-7.
[458] Arınç, İbrahim and Elik, Süleyman, 2010, "Turkmenistan and Azerbaijan in European Gas Supply Security", Insight Turkey, Vol.12, No:3, p. 173.
[459] Allison, *op-cit.,* pp. 284-5.
[460] Although the Americans opened air bases for Afghanistan operation, Uzbeks asked U.S. to close their bases in 2005. See, Walsh, Nick Paton, 2005, "Uzbekistan kicks US out of military base", *The Guardian,* 1 August 2005, retrieved on 10 June 2010 from http://www.guardian.co.uk/world/2005/aug/01/usa.nickpatonwalsh.

recent problems in Kyrgyzstan may confirm that Russia has gained the Uzbek support in her power contest with the United States.[461] In short, "by assuring a margin of maneuver in political-diplomatic and economic terms, Moscow simultaneously pursues the goal of keeping this area as a sphere of influence and as a counterbalance to the U.S. presence in the region"[462].

In light of these findings about Russia, it can be clearly argued that currently Russia is one of the indispensable actors of Central Asia and Caspian politics and will probably continue to be the dominant power in the region. Therefore, what kind of implications Russian influence in the region may expose on European energy security emerges as a central question as far as Caspian resources are considered. In more concrete words, as a potential rival power in a future multi-polar international structure, Russia's dominance on the foreign policies of the Caspian and Central Asian republics would have unwilling consequences for Europe and other great powers. Building pipelines from these countries to Europe via Russian territory, in that sense, would cause two main consequences: Firstly, it would increase Russia's ability to use energy as leverage in foreign policy. Secondly, it would diminish the ability of the regional actors to confront the policies of Russia. Therefore, Russian territory is not a viable solution for Europeans to construct an energy corridor to the Caspian resources from the lenses of neo-realism.

Since Russia is not a very reliable energy partner who generally prefers energy policy as a tool in its foreign policy, Turkey becomes a clear alternative to transfer Caspian and Central Asian energy resources to European market. As mentioned before, Iran might be an alternative but the cost of LNG and regime problems of the country make the Iranian option unfeasible. In that sense, the best route for Caspian resources seems to be the Turkish territory, which has currently been used for the Azeri gas. However, the current infrastructure has been constructed in order to meet the demand in Turkey and is not sufficient to feed the European countries. The Nabucco pipeline project was designed in order to increase the capacity in order to provide an efficient trade between Europe and the Caspian countries. An increased pipeline capacity, on the other hand, is a huge investment

[461] Bhadrakumar, M.K., 2010, "A Russian-Uzbek challenge to the U.S.", *Asia Times,* April 23, 2010, retrived on 10 July 2010 from http://www.atimes.com/atimes/Central_Asia/LD23Ag02.html.
[462] Freire, *op-cit.,* p. 129.

and requires more resources than the Azeri gas. In that sense, Caspian gas requires a very delicate balance of regional cooperation among Turkey's eastern neighbors. It becomes clear that most of the Azerbaijan's gas is guaranteed to fill up Nabucco, while Kazakhstan, another potential gas provider, is not guaranteed yet. As for the Turkmen gas, on the other hand, China emerges as a very critical rival actor.[463] By the end of 2009, China has already concluded several oil and gas supply agreements with Kazakhstan, Uzbekistan and Turkmenistan and constructed Kazakhstan – China Oil Pipeline and commissioned Central Asia-China Gas Pipeline.[464]

To sum up, as long as Europe attracts these three countries as a reliable energy buyer, European energy security will improve, and as long as Turkey convinces these countries to provide natural gas to Europe, Turkey's importance for European countries becomes more critical. In other words, the Caspian and Central Asian resources are not totally sufficient, yet are very important for European energy security question, which requires Turkey's full support.

4.5.2. Iran

As an important oil and gas producer, Iran should be evaluated separately. This country has both reserves in the Caspian and in the Gulf. Considering Iran's multi-regional status, it is impossible to disregard Iran when energy policies are shaped. Unlike the Caspian Basin, the Russian impact on Iran is very trivial. From a European perspective, the most critical question with regards to Iran is related to the U.S. and China. As for the former, the strict U.S. sanctions on this country inhibits European entrepreneurs to engage more actively in Iran while the latter has become a tough competitor for Europe as far as the vast Iranian oil and gas resources are considered.

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[463] China has begun to direct its energy companies to acquire interest abroad since early 1990s when the country turned into a net importer of oil. See: Hall, Gregory and Grant, Tiana, 2009, "Russia, China and the Energy Security Politics of the Caspian Sea Region after the Cold War", *Mediterranean Quarterly,* Vol. 20, No:2, pp. 124-9.

[464] For details of Chinese activities in the energy markets of Central Asia and Caspian, see: Turkmenistan to Join China, Kazakhstan pipeline project, 2007, *Forbes,* retrieved 07.04.2007 from http://www.forbes.com/feeds/afx/2007/07/04/afx3883648.html.; Sharip, Farkhad, 2007, "China Secures New Access to Kazakh Oil", *Euroasia Daily Monitor,* Vol. 4, Iss. 237.; Kazakhstan, China agrees to press ahead with pipeline, 2007, *Reuters,* retrieved 08.1102007 from http://uk.reuters.com/article/idUKL0888292120071108.

First of all, developing special relations with Iran is not as easy as other regional actors since there is an ongoing U.S. embargo on that country. The primary motive of the Iran Sanctions Act is to prohibit trade with and investment in Iran in order to hinder its ability to modernize its key hydro-carbon sector.[465] In other words, the U.S. perceives investing in Iran as a direct threat. Since U.S. has refrained from investing in Iranian energy sector, directly investing huge amounts in that country by major European powers would somehow be regarded as an effort of balancing the U.S. power.[466] Despite this fact, some of the energy companies of the major European countries invested considerable amounts in Iran. Since 1999 French Total and Italian ENI invested more than 3 billion USD in Iranian energy sector.[467]

On the other hand, the current American administration works very hard for encouraging foreign companies to halt their investment in Iran.[468] As a result of this pressure, four of the Europe's five biggest oil companies convinced to stop their activity in Iran.[469] Serious messages from the superpower deterred most of the other major powers in the unipolar structure. However, China is somehow reluctant to receive the U.S. message about investing in Iranian energy fields because Iran is the third main energy supplier of China. Chinese state owned oil companies have signed memorandums, which covers more than 100 billion USD investment in Iran's gas and oil production. In some of the cases, Chinese companies have replaced gas and oil fields that were formerly contracted by European energy companies.[470] From this point of view, ongoing Chinese investment in Iran means that China will have greater benefits than Europeans from Iranian energy

[465] Katzmann, Kenneth, 2007, "CRS Congress Report for Progress: The Iran Sanctions Act", *Congressional Research Service- The Library of Congress*, retrieved 26.11.2010 from www.fas.org/sgp/crs/row/RS20871.pdf, pp.1-5.
[466] Ikenberry and others has made an analysis on recent balancing activities on the current world structure. See: Ikenberry, John G., Mastanduno Michael and Wohlforth, William, 2009, "Unipolarity, State Behavior and Systemic Consequences", *World Politics,* Vol.61, No: 1, pp.1-27.
[467] Katzmann, *op-cit.,* p.6.
[468] Kaufman, Stephen, 2010, "Pressure Increases to Discourage Energy Investment in Iran, *America.gov,* retrieved 30 October 2010 from http://www.america.gov/st/mena-english/2010/September/20100930162745esnamfuak0.3756525.html.
[469] Kraus-Jackson, Flavia and Sheikholeslami, Ali, 2010, "Total, Shell, Eni to End Iran Investments, U.S. Says", *Bloomberg,* 01 October 2010, retrieved 30 October 2010 from http://www.bloomberg.com/news/2010-09-30/total-shell-eni-will-end-investments-in-iran-s-energy-sector-u-s-says.html.
[470] Pompfret, John, 2010, "European oil companies pledge to end oil investment in Iran over nukes program", *The Washington Post,* 30 September 2010, retrieved 30 October 2010 from http://www.washingtonpost.com/wp-dyn/content/article/2010/09/30/AR2010093006452.html.

resources because of the U.S. sanctions imposed on European countries. Put differently, China would clearly have relative gains against Europe unless U.S. achieves to convince China not to cooperate with Iran in energy sector. Being anxious about Chinese activity, Europeans are leaving Iranian fields involuntarily because of American pressure. On the other hand, some major European Union members like Germany still searches for energy investments in Iran[471], which can be read as a confirmation of a drift in transatlantic relations.

However, the power gap between the U.S. and major EU countries do not let Europeans to implement their own policy in the region. This may increase the inclination of Europeans to engage in balancing against the United States. However, it becomes clear that Europeans cannot implement their policies without the approval of the U.S. Since the Europeans cannot directly oppose to their long-term ally and protector, they may prefer soft balancing.[472] Therefore, it is possible to argue that the U.S.'s Iran policy and the pressure imposed on Europeans may increase the inclination of Europeans towards balancing, which is consistent with the arguments about the consequences of aggressive U.S. unilateralism.[473]

In contrast to European's conformity with the American policy, some other great powers are not totally obedient to U.S. preferences. China, for instance, continuously invests in Iran without considering the American pressures. China engages in a policy to develop special relations with countries which may provide necessary economic resources to the Chinese economy. Iran is one of these countries that China develops special relations.[474] According to some analysts, China assumes even the risk of war so that U.S. should let a room to the rising power of Asia.[475] Furthermore, Russia has also given

[471] Iranian energy sector attracts investment, 2010, *United Press International,* 25 August 2010, retrieved 30 October 2010 from http://www.upi.com/Science_News/Resource-Wars/2010/08/25/Iranian-energy-sector-attracts-investment/UPI-78671282751806/.
[472] Pape, *op-cit.,* pp. 8-9; Paul, *op-cit.*, pp.46-71.
[473] For the negative impact of unilateral approach of the US, see: Nye, Joseph S., 2002, *The Paradox of American Power: Why the World's Only Superpower Can't Go It Alone*, New York: Oxford University Press; Zhou, Yu, 2001, "American Unilateral Approach Threatens International Relations," *Beijing Review*, Vol. 44, Iss. 32, pp. 8–10; Rodman, Peter W., 2000, "The World's Resentment: Anti-Americanism as a Global Phenomenon", *National Interest*, No. 60 (Summer 2000), pp. 33-41; Art, Robert, 2003, *op-cit*.
[474] Foot, Rosemary, 2006, "Chinese Strategies in a US-Hegemonic global order: Accomodating and hedging", *International Affairs,* Vol.82, No:1, p. 86-7.
[475] Zweig, David and Jianhai, Bi, *op-cit.*, p.25.

considerable support in Iran's nuclear projects mainly for two reasons: Firstly, Moscow is uneasy with the U.S. penetration into the region and increased its strategic cooperation with Iran.[476] Secondly, Iran is an important economic partner for Russian military and nuclear industries, which has been in decline since the end of the Cold War.[477] Whatever the most prominent reason of Russia-Iran rapprochement is, it is clear that Russia may step forward in Iran if Europeans fall behind. In other words, Russia's balancing efforts against U.S. hegemony may be helpful for Europe, but it should be remembered that Russia is also another great power that Europe should somehow contain.

From this point of view, Europe should find a way to develop its strategic relations with Iran either by convincing the American administration to implement looser policies on that country for chastening Iran into more moderate behaviors, or by development of more democratic administration in Iran. Europe should also do this very soon since Russia, India and China are currently increasing their activities in Iranian energy fields. Being aware of this fact, European Commission increased its support for projects delivering natural gas from the region to Europe. Nabucco Pipeline project is the most prominent and concrete example. It is clear that the production level of Caspian countries are not sufficient to fill up the Nabucco line. In other words, European authorities must have thought some other resources when they declared support for Nabucco. This clearly shows that Europeans are interested in Iran, but cannot show their enthusiasm during an active American embargo. This, again, confirms the impact of systemic effects on actors' foreign policies as well as their energy policies.

The best route from Iran to Europe for building a natural gas pipeline is through Turkish territory. It is not feasible to pass from southern or northern routes. In a probable route destined to Europe from south of Turkey can pass through Iraq, Syria and a long off-shore pipeline under the Mediterranean which means instability and extra cost. A northern line, on the other hand, can pass through Russian territory and a long off-shore pipeline under the Black Sea, which means extra cost and continuation of dependency on Russia. Therefore, Turkey seems to be the best alternative with relatively cheaper construction costs and reliable political structure as a candidate country of the EU.

[476] Walt, 2004, *op-cit.,* p.15.
[477] Brooks and Wohlforth, 2005, *op-cit.,* pp.88-90.

Moreover, Turkey expresses for many times its will to build such a pipeline. In line with this perspective, some analysts argue that "in a multi-centered energeopolitical order where Russia and China are rival to U.S. and EU, some actors like Turkey have found themselves at the centre of attention as energy hub"[478]. Moreover, for some analysts, Turkey's role has been perceived as vitally important for connecting Europe to reserves in Caspian and Iran because of the stability and cost-efficiency that Turkey presents[479]. It is not an exaggeration to argue that Turkey has become a key player in energy politics, therefore, a key international actor in the regional politics.

4.5.3. Middle East

As mentioned before, some of the Middle East countries have considerable level of energy resources that may be decisive in shaping the structure of international system. To control and benefit from these resources are vitally important for great powers since energy security becomes a part of great power politics. For major EU powers, Middle East resources are critical for providing the diversification of energy resources. However, it is not very easy question for Europeans to solve for several reasons. First of all, Europeans are not the only major powers interested in this region. Since the Cold-War, both United States and Soviet Union have deep interests in the Middle East resources. As for the former, it is critical to continue the control most of the energy resources for preserving the unipolar structure. Therefore, U.S. government has perceived that U.S. security is directly related to the security of the Persian Gulf.[480] The Russian's are also interested in the region since the Cold War. Soviet Union had a privileged position particularly in Iraq until the Iraqi invasion of Kuwait in 1991. After the collapse of the Soviet Union, Russia tried to protect its leading role in Iraqi market while Iraqi leadership tried to provide Russia's political support at the international level in exchange for privileges in energy fields.[481] This relationship changed prior to the American invasion of Iraq in 2003. Kremlin was

[478] Coşkun, Bezen Balamir and Carlson, Richard, 2010, "The New Energy Geopolitics: Why Does Turkey Matter?" *Insight Turkey,* Vol.12, No:3, pp. 208-9.
[479] Arıboğan, Deniz Ü. Ana Bilgin, Mert, 2009, "New Energy Order Politics Neopolitics: From Geopolitics to Energeopolitics," *Uluslararası İlişkiler*, Vol. 5, No. 20, p. 127.
[480] Aras, Bülent, 2002, "The Caspian Region and Middle East Security", *Mediterranean Quarterly,* Vol.13, Iss.1, pp.92-4.
[481] Zlobin, Nikoai, 2004, "Iraq in the Context of Post-Soviet Foreign Policy", *Mediterranean Quarterly,* Vol.15, Iss.2, pp. 89-93.

attempting to gain some concessions from Washington in return for political support of a military strike on Iraq. However, Russia was unable to get what it expected from the superpower.[482] This clearly shows that the United States has great economic interests in Iraq and do not want to share its privileged position with any other potential rival power. It has long been discussed that the American administration's primary motivation behind the Iraqi invasion is to guarantee the energy resources in the region.[483] Remembering the cleavages in NATO with regards to Afghanistan and Iraq Wars, it would not be hard to argue clash of interests between some major European powers and the U.S. In other words, Europeans can no longer trust the U.S. about the energy resources in Iraq. Since the Europeans even do not rely on each other, it is difficult to imagine that Europeans would totally trust in American power and good faith. As Adams argued, "The more the United States expands, the more it will threaten the political and economic interests of other nuclear states. Thus, a new balance of power will surely form somewhere down the road"[484]. That is why, it may also be argued that the Americans are not very eager to let Europeans to take part in Iraq as an effort to control all other major powers within the international system. The limited activities of European companies in Iraq confirm the possibility of such a U.S. policy.

From this point of view, Europeans should work harder in order to guarantee Iraqi gas to flow into European energy grid. As mentioned before, investment in Iraqi gas is also important for using Iraqi territory for transporting gas from other southern countries, namely Qatar and Saudi Arabia. Although reserves in Saudi Arabia are also important for the sake of diversification, with its gigantic reserves, securing an agreement with Qatar is much more important than any other country in that region. Although this emirate messes around with gas production issues until the natural gas market becomes more lucrative as oil market,[485] having friendly relations with Qatar will be beneficial for major powers who are seeking for energy security. Securing all these resources in the Middle East, on the

[482] The concessions included guarantees for the existing agreements between Iraq and Russia as well as respect for Russia's political and economic interests in the region. See: *Ibid.,* p. 96.
[483] For a detailed analysis of these arguments, see: Jhaveri, Nayna J., 2004, "Petroimperialism: US Oil Interests and the Iraq War", *Antipode,* Vol. 36, Iss.1, pp. 2-11.
[484] Adams, Karen Ruth, 2003, "Attack and Conquer? International Anarchy and Offence Defence Deterrence Balance", *International Security,* Vol. 28, No:3, p. 83.
[485] Dargin, Justin, 2007, "Qatar's Natural Gas: The Foreign Policy Driver", *Middle East Policy,* Vol. 14, No: 3, pp. 136-142.

other hand, requires the cooperation of Turkey since Turkey's territory presents the most viable route among alternatives.

To sum up, Europeans should increase their activities in Middle East as they should do the same in the Caspian, Central Asia and Iran. Considering the American hegemony, "Europe, Russia, and China could press hard for the oil companies from countries other than the United States to have access to Iraqi oil contracts, which would increase the economic costs of U.S. occupation of that country"[486]. In line with this argument it may be argued that Russia and China engage in activities in the Middle East while Europeans prefer to comply with U.S. policies. However, major European countries should be more active and guarantee the necessary energy if they really want to become a great power. In doing so, Turkey has a pivotal situation for transporting the gas and oil from the region to Europe via pipelines. As in the cases of Caspian and Iran, Turkey could provide the best solution for European energy security, which is one of the most prominent parts of Europe's global actorness. From this point of view, the ongoing activities of Turkey in certain fields in Iraq[487] would be regarded as an initial step of an increased European activity in energy politics of the Middle East.

4.6. A Neo-Realist Evaluation of European Energy Security and Turkey

As clearly explained in previous parts of this study, the current structure of the system enforces major powers to question the unipolarity. Since European Union is not a decisive actor in international relations, the bigger member states and their foreign policy choices are more important than the Commission's policies. Examining the energy security question at European level actually confirms the impact of unipolar structure on individual member states. In other words, while Commission tries to form a common energy policy, the member states behave individually to guarantee their own energy security. Moreover, all major member states refrain from subordinating their energy policies fully to the discretion of the Union like they have already done the same for the foreign policy issues. None of the member states, on the other hand, is capable of becoming a great power

[486] Pape, *op-cit.,* pp. 10-11.
[487] El Gamal, Raina and Rasheed, Ahmed, 2010, "Iraq auctions off three major gas fields", *Reuters,* retrieved on 21 October 2010 from http://www.reuters.com/article/idUSTRE69J1LV20101020.

individually which may have the power to question the current American hegemony. Thus, they do not engage any overt balancing effort against the US.

However, this does not prevent Europe from being anxious about American power. Since the United States has greater military power than the total of the following five countries, Washington will be perceived as a potential threat by all other actors including the former Cold-War allies. In addition to Washington's military superiority, the United States controls most of the energy rich regions particularly in the Persian Gulf region. A combination of military and economic weaknesses cause anxiety among major European powers since the transatlantic alliance is challenged by differing geopolitical interests of each partner.[488] From the military perspective, Europeans have developed ESDP and try to form an army capable of rapid reaction where military operations are necessary. Furthermore, that security initiative of the Union has also evolved within an institutional structure after the Lisbon Treaty.[489] From the economic perspective, energy security takes precedence. Russia becomes an important actor for Europe since it has large energy reserves. In other words, the former superpower and former rival of Western alliance in the Cold War period has turned into a strategic partner of Europeans in the post Cold War era. However, because of its huge nuclear and conventional arsenal and its natural resources, Russia would still be another source of threat for European countries. Therefore, major European powers cooperate but do not trust to the Russians in providing energy security. In other words, major European powers cooperate with Russia in terms of energy for being relieved from the control of United States.

On the other hand, Europeans do not perceive Russia as a reliable actor. For providing energy security, therefore, Europeans look for other regions to provide oil and gas. In doing so, Turkey emerges as an indispensable partner for European countries. Turkey, formerly a close European ally in the Cold-War period, experienced a change in its foreign policy. Once followed similar foreign policy choices with the United States, Turkish

[488] Calleo, David P., 2008, "Europe Should Balance US Interests", *Atlantic-Community.org,* retrieved on 18 September 2010 from http://www.atlantic-community.org/index/Open_Think_Tank_Article/Europe_Should_Balance_US_Interests.

[489] For a detailed development of ESDP's institutional structure, see: Grevi, Giovanni, 2009, "ESDP Institutions", in Grevi, Giovanni; Helly, Damien and Keohane, Daniel (eds.), *European Security and Defence Policy: The First Ten Years (1999-2009),* Paris: EU Institute for Security Studies, pp. 19-68.

foreign policy has changed after the end of Cold War and includes contradictions with the superpower. Although Turkey is not a great power, Turkey could stand against certain American policies. The most prominent example of conflict between Turkey and U.S. is about different approaches to the Iranian nuclear problem. While American administration follows a very strict policy against Iran, Turkey prefers a modest approach which aims to integrate Iran into international community. How to assess Turkey's behavior is another critical point to investigate. Turkey is not a major power, yet Turkey's policy makers could refuse certain American demands. In doing so, Turkey might be encouraged by the confusion of Europeans about supporting U.S. policies. Some of the Europeans support American approach to Iran while some others seriously oppose the U.S. hard policies against that country. Being aware of the importance of reserves in the Persian Gulf some major EU countries try to promote relations with Iran. Germany, as the leading power of the Union, gives particular attention to Iran. Germany's position, in turn, may be a factor for motivating Turkey to engage actively the normalization of crisis with Iran. Furthermore, Turkey also indirectly contributes to balancing by increasing its relation with the Russian Federation. Turkey and Russia have an increasing trend of strategic partnership, of which energy constitutes the core cooperation area.[490] In other words, Russia and Turkey has turned to be strategic partners as far as regional politics are considered.

As a final analysis, Turkey is a strategic actor in the energy policies of some of the major European powers. Despite the structural constraints inhibiting major and regional powers to balance against the U.S. hegemony, their efforts to provide energy security in an anarchic structure somehow results in a different type of balancing. Turkey, both with its increasing relations with Russia and with its special geostrategic position, has become an element of the big energy game.

[490] Turkey supports Nabucco project to transport eastern gas to European markets whereas Russia has proposed South Stream project, which is an alternative pipeline passes under the Black Sea. Turkey and Russia have even achieved to have consensus on these competing projects, which also causes concerns other smaller regional powers. See: Berberakis, Taki, et-al, 2010, "Türkiye-Rusya anlaştı, 'komşu' rahatsız oldu", *Milliyet,* 14.09.2010, retrived 21 October 2010 from http://www.milliyet.com.tr/avrupa-i-carpan-akim-/ekonomi/haberdetayarsiv/14.09.2010/1126099/default.htm.

CONCLUSION

This study argued a very highly debated issue, energy security, which will certainly be increasingly important since technological innovations prevail over in every aspect of our lives. Since most of the previously mechanically made processes turned into electronic systems, people will require more energy resources. The sources of energy, on the other hand, are declining with an accelerating pace. Under these conditions, a struggle for energy is a natural consequence. When this struggle shifts to international politics, energy becomes a matter of state survival. In realist terms, therefore, energy is an element of power, which is necessary for international actors to achieve self-help.

In an anarchic international system, states should also define their positions according to the structure that shapes the system. In more concrete terms, the uni-polar structure of post Cold-War period requires both major powers and other smaller states to depict certain type of behaviors. The uni-polar structure and the power gap between the superpower and others pave the way for American administration to behave unilateralist policies which in turn increases others' suspicion about the intrinsic motivation of the U.S. As a response to hegemonic pressure of uni-polarity, other major powers implements policies for balancing the American power. However, the unprecedented power of United States does not let others to challenge the superpower overtly. Therefore, new types of balancing emerge in international politics, which aims to put certain impediments against the unilateral behaviors of Washington.

When these structural features of the system combine with increasing importance of energy resources, energy security becomes an indispensable part of foreign policy. Russia provides the most prominent confirmation for this argument. After the Russian Federation lost its primacy that Moscow experienced during the Cold War, Russian leaders inclined to use as a tool of their foreign policy. Russia enforces others to comply with Russia's policies by threatening to cut natural gas supply. Actually, this policy works properly where dependency on Russian natural gas is very high like in Belarus or Ukraine.

In the current uni-polar structure, where United States dominates the superpower position, the policies of European countries is in conformity with the ambiguity of the system. Despite having a very long standing alliance relationship, major European powers are anxious about the intentions of United States. Although Washington provided a secure shield to Europe against the Soviet threat during the Cold War years, the end of bi-polarity changed the system's structure. NATO's functions have changed while the Europeans planned to form their own security structure under the auspices of European integration process. Considering these facts, it is not an exaggeration to argue that Europeans do not totally trust to American power in the post Cold War structure. The American pre-emptive wars after September 11 events reinforced Europe's anxiety. Divergences among transatlantic relationship become apparent particularly after the Iraqi War. What lies beneath the divergences between the two sides of the Atlantic was probably the difference in perception of and expectation for the future of international system. While Bush administration contented a neo-conservative movement with strengthening American position by using absolute military power, European capitals were more concentrated on a shift to multi-polarity. From that perspective, leading European countries follows a policy to adapt themselves to a new structure which is currently ambiguous enough to cause anxiety and distrust about the intentions of the allies.

Reading energy security question of the major European countries from a systemic perspective, therefore, requires an understanding of neo-realist point of view. Such an approach clearly shows that Europeans are trying to renew their energy policies in line with structural impacts and improve their relations with countries possessing large energy reserves. Some of these policies naturally contradict with the dominant power of the

system and the Europeans dare not challenge American power. This, in turn, enlarges the cleavage within the transatlantic alliance.

The American Administration, however, did not spend considerable attention to the European allies since their primary concern has been the continuation of unipolarity without raising any other competitor great power. This is the root cause of increasing partnership between Russia and European countries. The increasing relationship between Moscow and other European capitals confirms neo-realist critics about the use of American power. Neo-realists argue that the policies followed by Washington do not allow the persistence of uni-polarity. In contrast, those policies invoke others to balance the U.S. as long as it is possible. Russia, for instance, actively tries to implement a balancing policy. Although China is not very active in balancing, there are certain sentiments about Chinese enthusiasm for a global great power status. The current activities of these two actors in energy politics actually confirm their role in balancing the United States.

Europeans, on the other hand, do not prefer an active policy of balancing. As some scholars define, European efforts may be evaluated as a new type of balancing. By territorial denial, diplomatic entangling or some other means of politics, European countries implement a policy of soft-balancing. It is hard to argue that Europeans could use means of hard balancing if they had enough power to challenge the U.S. However, they may have a prompt role in balancing if the U.S. does not provide necessary confidence in European capitals.

From an energy perspective, European countries need access to energy resources. Their particular attention is on natural gas, which is increasingly becoming the dominant energy source in European countries. Policies of the EU Commission targeting energy security does not make sufficient sound among member states since each member gives priority to own energy security problem. For most of these members, Russia becomes an indispensable natural gas supplier. However, Russia is also a potential great power in the future multi-polar international structure. Therefore, depending heavily on a potential future rival is not an expected outcome of energy policies of Europeans. This fact enforces both the Commission and governments of major European powers to search for alternative

areas for providing hydro-carbon resources. Among these areas, Caspian countries, Central Asia, Gulf region and the Middle East emerge has the maximum potential.

Since the other major global powers similarly perceive anxiety about the uncertainty in the international system, they also pay considerable attention to the resources in those regions. China and Russia has particular attention on Central Asia and Caspian resources while other South East Asian nations concentrated on Gulf region. Moreover, the current superpower has certain interests in all these energy rich regions. Therefore, it is very important for Europeans to follow a policy to plug the maximum available reserves into the European grid from those regions.

For European Union, it would be very risky to concentrate solely on one of those regions since other major powers have deep interests in each of those areas. Therefore, it would be more appropriate for Europe to improve energy relations simultaneously with all of the countries from Caspian, Gulf region and the Middle East. By this way, Europe would diversify its energy supply at the highest level. In doing so, Europeans may face impediments because of several reasons. First of all, Washington would not be a supporter of such a policy. Since Europe is another potential great power, Washington would like to control the power of its European allies. In addition, the resources of these regions are critical for U.S. for being able to prolong its powerful position. In more concrete terms, Europeans currently cannot develop special relations with Iran due to American policies. However, Iran is one of the most important sources of natural gas that Europe may necessitate to decrease its dependency on Russia. Therefore, Europe needs to improve its strategic position particularly in Iran and Gulf region even if the United States does not approve such an activity.

Secondly, another challenge that Europe may face with regards to its increased activity in energy rich neighborhood is the Russian energy policy, which aims to control the European market by increasing the Russian share in natural gas supply of Europe. When Russian share increases in European energy supply, Russia will not only provide economic benefit, but also have the chance to influence European countries against the hegemony of U.S. In line with this effort, Moscow developed close relations with Caspian and Central Asian republics in order to fix the oil and gas transfer through Russian territory. In

response to Russian policies, major European countries should find alternative sources which will be delivered via non-Russian routes. Otherwise, dependency on Russia will cause a negative impact on foreign policy choices of the EU during the post uni-polar structure.

From this point of view, Turkey emerges as the most appropriate partner for Europe as far as energy security is considered. Located adjacent to several energy regions, Turkey naturally assumes a role of energy hub. There are several reasons that make Turkey the favorable alternative. First of all, Turkey is an alternative that can transfer gas and oil from all of the three regions mentioned in Chapter IV. Even though Russia is considered to be a reliable partner for Europe, transportation of Middle East and Iranian resources through Russia may not be feasible. On the other hand, any route passing through Turkey's southern neighborhood may not be profitable and safe, particularly for the gas transfer from the Caspian. However, using Turkey's territories is feasible and secure for a long-term investment in the resources of the Caspian, Iran and Middle East.

Secondly, Turkey is a pro-western country which makes the country a reliable partner. Turkey currently experiences the phase of accession negotiations in EU membership process and is a full member of NATO since the early Cold-War years. The only question about Turkey's reliability may be the growing Russo-Turkish partnership in several sectors. Energy is one of these sectors that Russia and Turkey actively cooperates. However, Turkey is a regional power and probably does not prefer to be directed by Russia. In other words, in a post uni-polar world, where Russia emerges as a great power, Turkey will not prefer bandwagoning. Because bandwagoning entails the risk of entrapment and because Turkey is geographically contained by various potential great powers, it would be logical for Turkey to bandwagon with any of the future great powers.

Thirdly, Turkey has improved its energy infrastructure particularly in the past decade. Together with the pipelines mentioned in Chapter III, Turkey also concentrated on forming storage capacity which is critical in natural gas. This may not be perceived as an advantage of Turkey by some analysts because Russia has also an intricate pipeline infrastructure. However, Russian pipeline system is old-aged and has to be improved in order to pump the necessary amount of gas and oil.

Considering these benefits that Turkey presents to Europe in terms of energy security, this study reiterates the importance of Turkey for European security in general and energy security of Europe in particular by using a neo-realist analysis. In that respect, the study argues that major European countries should improve their relations with Turkey by cooperating more in the energy field. In addition, they should convince oil and gas producing countries for exporting their energy products via Turkish route. Furthermore, in doing so members of the Union should be careful about the interests of other major powers including the U.S. In short, Turkey's role in European energy security is very important, yet not decisive by its own. Without considering other factors, providing Turkey's support would not be enough for Europe.

It is still not clear, on the other hand, that Europeans are fully aware of Turkey's importance. In certain policy papers, European Commission and other institutional bodies of the Union has mentioned the importance of Turkey. However, some other member states do not pay any attention to Turkey in energy security. France is the most prominent example. Some other members, like Austria, behave as if Turkey's support is taken for granted without asking Turkish policy makers about their views. In more concrete terms, Austrians signed a memorandum of understanding with Iran on natural gas sale which is planned to be transferred via Turkish territories, yet nobody asked Turkey about the transit conditions. As this example puts forth, Turkey's role is disdained by some of the Europeans. Turkey's policy makers do not like this kind of approach to their role in energy security. In that sense, if Europeans aims to guarantee Turkey's support, they should understand that Turkey is not a simple transit country. Otherwise, Turkey may search for alternative partners for cooperation in energy. Since Turkey's foreign and energy policy elite is suspicious about the future of unipolarity, Turkey may improve strategic partnership with Russia, which would have drastic consequences for European energy security.

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T.C.
MARMARA ÜNİVERSİTESİ
AVRUPA BİRLİĞİ ENSTİTÜSÜ

AVRUPA BİRLİĞİ SİYASETİ VE ULUSLARARASI İLİŞKİLER ANABİLİM DALI

EUROPEAN ENERGY SECURITY POLICY AND TURKEY

DOKTORA TEZİ

Danışman: Doç. Dr. Gülden Ayman

Emirhan Göral

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To my parents,

Gülbin and Oktay Göral

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ÖZET

Bu çalışmanın öncelikli amacı Avrupa'daki büyük ülkelerinin enerji politikalarının uluslararası siyasetin sistemsel etkilerinden ne derece etkilendiğini ve Türkiye'nin Avrupa'nın enerji güvenliği üzerinde ne derece etkisinin olduğunu ortaya çıkarmaktır. Bu amaç doğrultusunda tez neo-realist bir yaklaşım kullanmakta ve uluslararası sistemin tek kutuplu yapısının Avrupa'nın büyük devletlerinin dış politika ve enerji politika davranışlarını soğuk savaşın bitiminden beri etkilemekte olduğunu tartışmaktadır. Tez ayrıca Türkiye'nin Avrupa'nın enerji güvenliğini sağlamadaki rolünün çok önemli fakat tek başına yeterli olmadığını da tartışmaktadır.

Çalışmanın ilk bölümü neo-realizmle ilgili var olan kaynakların incelenmesi yoluyla teorik çerçeveyi oluşturmaktadır. İkinci ve üçüncü bölümler sırasıyla Avrupa Birliği ile büyük üye ülkelerinin ve Türkiye'nin enerji görünümünü ele almakta ve enerji politikalarını değerlendirmektedir. Son bölümde, Avrupa'nın büyük devletlerinin enerji güvenliği konusu komşu bulunan enerji bölgeleri ve küresel güç dengesi çerçevesinde ele alınmaktadır.

Sonuç olarak, bu çalışma AB'nin büyük üyeleri için enerji güvenliğinin çok kritik bir konu olduğunu ve Avrupa ile potansiyel enerji sağlayıcıları arasında bulunan Türkiye'nin de Avrupa ülkelerinin enerji güvenliğini sağlamada stratejik bir role sahip olduğunu ileri sürmektedir.

ABSTRACT

The foremost aim of the present study is to find out what extent the energy security policies of the major European countries are affected by the systemic imperatives of international politics, and to what extent Turkey has an impact on energy security of Europe. To realize this aim, this study applies a neo-realist approach and argues that the uni-polar structure of the international system has changed the foreign policy and energy policy behaviors of major European powers since the end of the Cold-War. The thesis also argues that Turkey's role in providing European energy security is crucial yet not decisive on its own.

The first chapter defines the theoretical framework by examining the existing literature on neo-realism. The second and third chapters examine the energy outlook and evalute energy policies of the EU and its major member states and Turkey, respectively. In the final chapter, the energy secuirty of major European powers is analyzed with respect to neighbouring energy areas as well as the global balance of power.

To conclude, this study maintains that energy security is a very critical issue for the major EU member states and Turkey has a strategic role in their energy security since the country is located in between Europe and its potential energy suppliers.

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INTRODUCTION

The end of the Cold War paved the way to a new political order at global level. Most of the actors have begun to play new roles with the evolving structure of the system. The Soviet Union collapsed while its former enemy emerged as the sole superpower. However, new balances have begun to form a new structure. The Russian Federation has risen from the ruins of Soviet Union while China, India, Brazil and some other regional powers have emerged as new powerful actors. The smaller actors have also defined new policies in order to survive within the newly shaping structure of international politics. As a prominent example, the Eastern European Countries engaged in a process of accession to the EU and have become part of the European integration. Consequently, new forms of regionalist movements emerged as a counter-balance to the impact of globalization.

One of the most prominent historical developments of this period is the European integration process. The Union has engaged both in a process of enlargement and deepening. The Maastricht Treaty brought the full implementation of single market among the Member States in 1992, and was followed by the accession of Austria, Sweden and Finland in 1995. During the 1990s, the European integration process has witnessed severe structural changes not only in the pillar of EEC but also in the areas of Common Foreign and Security Policy (CFSP) and cooperation in Justice and Home Affairs (JHA). The Amsterdam and Nice Treaties were signed in order to provide harmonization of the Union in a more integrated and enlarged Europe. The consequences of these efforts were the enlargement of 10 new member states in 2004 followed by further enlargement of Bulgaria and Romania in 2007. The problems that some member states confronted during the ratification of a proposed European

Constitution in 2003 has been avoided by the Lisbon Treaty, which envisages new institutions and a new system to the Union with its enlarged member state structure. By this way, the EU expects a more active and coherent position in order to cope with the current developments in world politics.

The September 11 events, on the other hand, have drastically changed the geo-political calculations of all international actors. Regardless of the decisions of international community and the United Nations the American invasion of Afghanistan which was followed by Iraq depicted that the unilateralism and the U.S. search for hegemony reached its peak point. The Europeans reacted these developments by issuing a European Security Strategy (ESS), in which the threat perceptions of the EU is generally drawn. According to the ESS, "terrorism, proliferation of weapons of mass destruction, regional conflicts, state failure and organized crime are the main threats"[1]. Therefore, different from the U.S., the Union's main threat perceptions do not include direct or indirect economic concerns. Although, the Member States have currently retained competence in the field of foreign policy and security, important steps has been taken at the EU level after the September 11 events. Yet, the member states have still retained policies in favor of their national interests.

Energy Issues in a Changing World

The globalization has brought more liberalism in trade, therefore economic concerns have often turned as a determinant of political issues of international actors. As an economic giant, the EU has used economics as a tool in its foreign relations. However, EU's ability to implement a unique policy is considerably very restricted. On the other hand, the bigger members of the EU are eager to have an active role in international politics, thus the European Security Strategy mentions EU's global actorness for several times. According to many analysts, therefore, the Union is in need of developing more assertive political and military initiatives equivalent to its global economic potential and capabilities of the member states. In that sense, by their growing roles in international arena, China, India, Japan and Russia are important actors that may affect the global role of the EU besides the United States.

[1] Solana, Javier, 2003, "A Secure Europe in a Better World – European Security Strategy", *Document Adopted at the European Council*, Brussels. For a detailed analysis of this document, see: Cebeci, Münevver, 2004, "European Security Strategy: A Reflection of EU's Security Identity?", *Marmara Journal of European Studies*, Vol. 12, No: 1-2.

As an indispensable element of economics, issues of energy take a pivotal role within the political agenda of the main international actors. For some analysts, the American invasion of Afghanistan and Iraq has been attached to the ambition for the control of energy resources by the hegemon. Moreover, the economies of some emerging powers such as China or India are severely in need of the scarce energy resources. Put differently, the energy resources will certainly be very important for major powers in a world of multi-polarity because energy resources constitute an important part of internal efforts to provide the balance of power in international system.

On the supply side, the former Soviet Republics of the Central Asia as well as the Middle Eastern resources seem to be the most appropriate way to solve the energy demand for all major international actors. Particularly, the Russian Federation emerged as an important energy supplier of natural gas and oil. However, the recent energy crisis between Russia and Ukraine about the transfer of gas to Europe which was followed by a similar crisis with Belarus has depicted that relying solely on Russian resources would be a problematic. Therefore, diversification of suppliers as well as energy mix of a country has become an important foreign policy objective of all major powers. In that respect, China increased its presence in Sudan, while the Europeans increased their efforts in Caspian basin and to a limited extent in Iran.

European Energy Policy

In line with the developments mentioned above, providing energy security has been an absolutely necessary part of EU's global actorness. EU is the biggest energy consumer after U.S. with 16 percent of the world total energy demand. Around 50 percent of the EU energy demand is dependent on imported resources. Furthermore, this amount is expected to increase more than 20 percent in the next 30 years.

On the other hand, the internal energy resources of member states are not only very limited, but also have a high marginal cost of production. The Norwegian resources, which have contributed to the energy supply of the continent more than three decades, are dwindling. Similarly, more than half of the North Sea reserves have also been extracted and those resources will be exhausted in the near future.

From the demand side, oil and gas are the main resources of energy for most of the EU economies. Approximately 65 percent of the total energy demand is supplied by oil and gas,

half of which are imported from foreign countries. In that sense, gas and oil imports are heavily dependent on different suppliers. Among them, Russian Federation and the Middle Eastern Countries are the main suppliers of the EU member states. Some African countries as well as Latin American members of OPEC are also contributing the energy supply of the Europe. However, the primary supplier of the leading EU members is Russia.

In light of this, energy supply emerges as a vitally important question for the Union and for its ability to play a global role. In order to provide energy security, the EU tries to implement several solutions. According to the European Commission, the main agenda item is the diversification of energy resources. This diversification process has two sides: (1) diversification of the type of resource; (2) diversification of the origin of hydro-carbon resources. Considering the first one, the EU has taken important steps particularly after the oil-crisis of 1970s. Different member states preferred different ways of solution for this problem. For example, France has followed a policy of nuclear energy which contributes more than 40 percent of its energy demand at the moment. Similarly, Germany has long been engaged in huge investments on clean energy and renewable resources.

On the other hand, diversification of suppliers has still poses problems to the economies of member states. As mentioned above, the Union has already been heavily dependent on Russian supplies particularly when the natural gas is concerned. This is almost the same for the oil supplies. However, the easier transportation of oil makes Europe less dependent on Russia as far as oil is considered. The ratio that Russian gas supplies alone is about 45 percent of the total gas supply. The European Commission, however, tries to limit the amount of import from non-EU countries to a maximum of 30 percent of total energy supply in order to increase energy security at Union level. Therefore, the member states are searching for alternative ways of achieving the diversification of suppliers.

In that sense, several alternatives to Russian gas are available for the EU members. Caspian Region, North African and Latin American gas resources can easily be mentioned among some distinctive alternatives to the Russian supplies. However, in a world of global competition, the cost of energy has become an important element of energy security as it is clearly mentioned by the European Commission. The transportation of oil can provide a benefit for the buyers. On the other hand, natural gas is a quite different commodity when compared to oil. As for the gas, ‘the closer the cheaper’ is the main trade principle. Natural gas can also be transferred via vessels in the form of LNG. However, this liquefaction and re-

gasification processes are lengthy and entails extra costs on the consumers. Therefore, the most viable solution for European energy demand is to have a more intensified relationship with the surrounding energy rich regions: the Middle East, Caspian and the Central Asian Countries. In doing so, it should be reminded that trade and economic concerns are not the only determinants of policy choices in energy security. The impact of system structure on the decisions of states is also worth to consider as neo-realism argues. States sometimes do not prefer the most optimum alternative when their security concerns outweigh energy issues. Baku-Tbilisi-Ceyhan (BTC) Pipeline is an obvious example for understanding the role of international political system on energy policy, which has become an important part of foreign policy. From this point of view, it is necessary to comprehend the current structure of international political system as well as positioning of European actors within the system in order to understand the formation of energy policy at European level.

Turkey's Role in European Energy Supply

The continental Europe has surrounded by several energy islands. From Norway and North Sea to Russia, from North Africa to the Middle East and the Caspian, the continent has a very energy rich neighborhood. The direct energy lines from the north and from Russia have a long history. A similar situation is relevant for the southern energy lines. The North African resources are transferred to the continent via pipelines or in the form of LNG. However, Middle East, Caspian and Central Asian are different from other neighborhoods as far as energy resources are considered. There is no direct link between these areas and European energy grid. As for the oil, the question is not complicated because oil can be transported to the European markets by tankers. However, natural gas requires long distance pipelines from the source of the gas to the market. Gas from the Middle East can be either transferred via a new sub-Mediterranean pipeline or through Turkey. For the Caspian and Central Asian gas, on the other hand, there are two alternatives: via Turkey or via Russia.

From this point of view, Turkey, as an energy hub rather than a transit country, has become an important player in energy politics. The importance of the country seems to be growing in an accelerating pace. In that sense, Turkey's role may be evaluated from two different perspectives: Firstly, Turkey is a rapidly growing oil and gas market as a growing economy. Secondly, but more importantly, Turkey is geographically located in a position which enables the country to play the role of a hub between the gas and oil resources and consumer countries.

As far as Turkish market is considered, oil and gas constitutes a huge part of Turkey's energy demand. Almost 90 percent of the oil demand is imported from external sources. On the other hand, the gas consumption is steadily growing particularly in the last two decades. Russia has become the main supplier of Turkish gas market. However, most of the analysts assume that relying solely on Russian supplies would be insufficient and risky for Turkey. In order to diminish dependency, Turkey has promoted special trade relations with Iran. Although there are certain gas shortages in trade, this relationship brought Turkey leverage in its relations with other suppliers. Furthermore, in the long-term, Caspian and Central Asian gas resources will probably present Turkey alternatives to the Russian gas.

The second perspective for Turkey's role is much more important than the first one. Turkey has a pivotal role as a transit country between energy resources and energy demanding countries. Turkey is located not only on the way of the Caspian and Central Asian energy routes, but also the supplies of Iran, Gulf and Middle East Countries. Therefore, as long as the European countries seeks for alternative gas and oil resources in order to be released from problems derived from unreliable Russian energy policies, Turkey may probably be one of the key elements of European energy policy. Therefore, Turkey has an important role in European energy policy. From this point of view, it is also necessary to evaluate the positioning of Turkey within the international political system for understanding the impact of Turkey's energy policies on European energy question.

Research Question and Methodology

In light of this preliminary information, the primary research question of the thesis aims to find out to what extent the energy security policies of the EU member states are affected by the systemic imperatives of international politics and to what extent Turkey has an impact on energy security of Europe. In other words, this study tries to focus on energy policies of European actors and Turkey from a neo-realist perspective by examining the interplay between energy security concerns of European states and the structure of international politics.

The current uni-polar structure of international system depicts a transition to poly-centric feature which is characterized by the rise of some other major powers to the detriment of the hegemonic power. Put it differently, the transition of international politics has not been finally shaped since the end of cold war. The economic growth of some other major powers causes

inclination towards multi-polarity in economic terms, which may also give way to multi-polarity in military terms. Currently, the system's structure still shows ambiguity, which makes it difficult to evaluate the actor behaviors. The behaviors of European powers and Turkey, in that sense, should be evaluated from a perspective of a structural analysis.

Major European powers engaged in an integration process which gives a veto power to smaller states while the major powers have more say in decision making. The Commission also shows a unique characteristic with an increasing power in decision making over the national governments. However, the structure of international system still affects the decisions of individual member states although there is currently a strong effort for uniting the Europe. An analysis of Union's energy policies in general and energy policies of EU member states in particular clearly supports the arguments put forward by neo-realist writers. EU cannot form a common energy policy and cannot shape its foreign policy accordingly because the major European powers tend to manage their own energy policies regardless of the common benefit of the other member states. Since major powers shape their energy security and foreign policies according to their own agenda and the new structural imperatives of the international political system, the EU institutions cannot be able to form a common energy policy. This confirms that systemic pressures on foreign policy and energy policy decisions are at work. Therefore, the thesis argues that the uni-polar structure of the international system has changed the foreign policies of major European powers as well as their energy policies during the post-Cold War period.

In line with the internal dynamics among European powers, the end of Cold War has a formative impact on transatlantic relations. Although both sides of the Atlantic do not perceive the other as a threat, the lack of a common enemy and differences of threat perception in current global political order caused loss of coordination among former close allies. The European efforts for forming its own military power, direct and open opposition to certain US policies, and engaging intensive relations with other major powers should not be evaluated as a balancing activity, but rather as a lack of convergence of interests among members of western alliance. However, these activities of European states may, in turn, be fruitful for the countries that engage balancing against the US. It should clearly be noted that this does not mean that Europe is balancing, but rather as Europeans efforts to highlight their primary interests which are not congruent with the US interests.

The thesis also questions whether Turkey's role in international structure and its activities in energy politics have an impact on energy policies of EU members. Since Turkey is geographically located between energy consuming European countries and oil and gas rich energy producing countries, Turkey's role in providing European energy security has become a current debate. On the one hand, Turkey has a long history of membership to the European integration process. As a candidate country, Turkey adopted most of the EU norms to its internal political system as if the country is a member state. However, certain activities of anti-Turkish lobbies in Europe also discourage Turkey's future plans about the Union. In that sense, the changes in the system's structure also affects Turkey's foreign policy and energy policy decisions, which in turn have a direct impact on European energy question.

In light of this debate, the thesis also argues that Turkey's role in providing European energy security is crucial yet not decisive on its own. Similar to European states, Turkey's energy policy and foreign policy have also been affected from systemic pressures of international politics. Different from Cold-War security understanding, Europeans are in search for cooperation with other great powers, particularly with Moscow, in order to provide their own security. Turkey also promotes special relations with Russia in order to cope with the systemic pressures. Therefore, the thesis also argues that in the absence of a security umbrella provided by a superpower as it was during the Cold War, Europe and Turkey follow a similar path in formation of their energy and security policies, which requires forming a balance among the great powers. Increased cooperation with Russia, however, is not sufficient in an anarchic world since Russia is also not completely trustworthy. Thus, alternative sources gained special importance. In that sense, the thesis further argues that Turkey and Europe have to work together for providing their security in an evolving international structure. This common concern, in turn, may have a positive impact on Turkey's EU membership parallel to the structural effects of the system on energy and foreign policies of major EU countries and Turkey.

In line with these arguments, this study emphasizes that some factors are decisive in determining the impact of energy on EU-Turkey relations. These are; the policies of the United States within a unipolar structure of international system; behaviors of other major powers within the system; and Turkey's foreign policy behaviors with respect to current development in the international politics. In more concrete terms, the continuation of unipolarity and hegemonic behaviors of the U.S. is decisive in shaping European energy

policy since it also shapes foreign policies of major European countries. In addition, certain activities of Russia and China have also a direct impact on major EU member states' energy policies since China and Russia are potential competitors of Europe in an evolving international structure where Europeans should protect their interests against them. Finally, Turkey's policy priorities and relations with western world may also change the minds of European leaders about engaging long term and complicated cooperation with Turkey in energy field.

In analyzing these discussions, the theoretical framework is constructed on neo-realist premises. The study initially concentrates on the impact of foreign policy considerations on energy security decisions and vice-versa. Although energy is regarded as a totally economic issue, energy trade is different from all other economic sectors since energy has a decisive impact on military and security issues of international actors. The importance of energy resources one state possesses naturally cannot be compared to the importance of its military capabilities. Yet, it is obvious that having sufficient oil and gas reserves apparently strengthen political power of an international actor. In other words, energy resources have become an indirect subject of system analysis. Therefore, the theory chapter examines the structure of international system with respect to energy security policies of European actors. Furthermore, Turkey's perception about the distribution of power among global actors and the positioning of its foreign policy are also evaluated from an energy policy perspective. By this way, this study tries to help to identify some conclusions about how Turkey may contribute to the EU's energy security and the relation between European energy security and Turkey's membership. In other words, the study will help understand whether Turkey's energy policies are relevant with the energy strategies of the European Union members or not. The thesis strongly emphasizes that energy policies of major European countries and Turkey are in conformity because both parties are affected from structural effects. Furthermore, the accordance between energy policies of Turkey and Europe has a positive impact on EU's ability to reach various energy fields in a safe way via Turkey. Therefore, Turkey may and should be considered as an indispensable part of EU's economic and social life as well as of its emerging global actorness, which in turn, may affect Turkey's membership status.

The materials used in this study are mostly selected among primary resources. First of all, the theoretical explanations are examined with reference to original texts and books that were introduced by the leading figures of neo-realism. Secondly, information and data about energy

policies are gathered from either governmental agencies or international organizations, which are operating directly in energy politics. Last but not least, interviews with specialists and individuals working in energy sector or governmental bodies were preferred as an important source. In that respect, Jonathan Stern (Oxford Institute of Energy Studies), Heinz Kramer (SWP-Berlin), Roland Götz (an independent energy analyst) and Tuncay Babalı (Ministry of Foreign Affairs-Republic of Turkey) expressed their opinions on energy politics. Secondary resources are also used where primary resources are not available or required more sophisticated interpretation.

The thesis begins with a theoretical explanation selected for examining the energy policies. Generally international conflicts emerge as a result of struggle for power. Today, control over energy sources is an important element of power. In that sense, there is a struggle among international actors for providing energy security. Even the oil and gas exporting countries have some 'perceived vulnerabilities' as far as energy security policies are concerned. Therefore, the neo-realist theory of the international relations, which suggests a system level approach, proposes an interesting theoretical base for this study and help for explaining some aspects of the research question. As one of the most frequently used international relations theory, neo-realism seems to include all the necessary tools to evaluate energy security issues. However, there may be an inadequacy of the theory since neo-realism mostly concentrates on traditional security and military policies of actors rather than economic aspects of security. Therefore, energy security may somehow be regarded as an additional concept for the neo-realist theory, which has continuously been developed since the end of Cold War. In that sense, this thesis may be evaluated as one of the preliminary studies which introduce energy politics in the field of neo-realism. Naturally, some may argue that the relevance of energy politics into the research area of neo-realism is wide open to criticisms. Yet, this study tries to construct a link between neo-realism and energy politics.

After explaining the main neo-realist arguments, therefore, the theory chapter of this study evaluates the current structure of international system, which is assumed to be characterized as a transition period. While doing this, the study concentrates naturally on the European actors as well as Turkey by examining their positions vis-à-vis the unipolar power. It should also be noted that the European actors are evaluated from the perspective of European integration process. Put differently, the position of each major European power and the Union in general has been evaluated with their preferences in energy policy decisions. As it is shown

in further chapters of the study, examining policy preferences of member states confirms selecting neo-realist theory as a starting point.

The second part will comprise EU's energy strategies as well as the biggest four member states' energy outlook and energy perspectives. Since neo-realism is the main tool to construct the framework of this study, energy policies of great powers in international arena are unavoidably important for a prompt conclusion. From this point of view, the energy policies of Germany, France, Italy and the UK are examined in detail. The supply and demand figures are evaluated in order to understand their energy dependency. This would also give us a chance to grasp their expectations and potential energy strategies. In this part, the strategies declared by these countries based on specific governmental documents are also taken into consideration.

The following chapter is about Turkey. Turkey's energy policies and preferences are evaluated in detail. The current developments in Turkey's transit role are examined with special references to specific projects. The BTC, Southern Caucasus Pipeline and other alternative routes passing through Turkey are also taken into consideration in order to understand the capabilities of Turkey as an energy hub with respect to power configurations in a future multi-polar world. This part may also help to comprehend the energy tools that Turkey may use in its relations with the EU.

In the final chapter, the relation between energy security and international system is examined with respect to energy policies of EU member states and its energy neighborhood. Specifically, the existing three main energy corridors, namely northern corridor, Russia and North Africa are examined from a neo-realist view. To be more precise, the impact of northern corridor is explained with reference to internal struggle among major European countries to access the Norwegian gas and oil. Northern corridor, in that sense, helped to show the conformity of energy policies with neo-realist premises since all major powers prefer their own interests instead of a common benefit.

Secondly, Russian corridor is examined in order to understand the impact of structure of international system on foreign and energy policies of member states. Since the hegemonic behaviors of the U.S. irritate other international actors, some of the major European countries engage in peculiar activities that can be regarded as balancing. Strategic partnership with former Cold War enemy, Russia, is the most prominent example of these behaviors.

Therefore, the examination of the Russian corridor helps to explain the balancing behaviors of member states from a neo-realist point. In the final analysis, the insufficiency of existing energy corridors is emphasized while the fourth corridor emerges as a solution to European energy security problem. In that respect, Turkey's geostrategic position as a special actor is mentioned with respect to the energy rich areas in the Caspian, Central Asia, Iran and the Middle East. In the concluding remarks, Turkey is presented as a stabilizing factor and energy hub that can contribute not only the energy security problem of Europe, but also to the global actorness of major European countries. Without Turkey's contribution, European countries may not be able to have a decisive impact in a future multi-polar international structure. For confirming this argument, some alternatives for Turkey's role are also evaluated, yet disregarded because of inefficiency or inappropriateness of those alternatives.

To sum up, the reciprocal impact of system and European energy policy on each other is clearly confirms that neo-realist arguments prevail in foreign and energy policy decisions of European policy makers. Turkey's position, furthermore, contributes the argument in the same way. In other words, what Turkey implements in energy policy is also affected from structural effects and a proper coordination between major European capitals and Ankara could help both parties to secure themselves in a struggle for power in world formed by several great powers other than the United States. Today the United States assumes the role of unipolar power.

However, the shaping of structure is ambiguous and China, Russia, Japan, India may become great powers as neo-realists envisage. In that case, Europeans should be ready to survive in a multi-polar world, which is characterized as the most insecure condition. Despite their individual capabilities, none of the leading EU members are currently able to become a great power by their own efforts. They need to act together. In other words, their internal capabilities are not sufficient for balancing other powers. Being aware of this fact, EU members and the European Commission continuously work on proposals to form common positions in foreign and security policies. However, in most cases it becomes very difficult to achieve a unique stand. In the energy area, Europeans should not only act as a unique structure, but also provide the support of non-member states.

These non-members are energy producing and transit countries. As for the producers, Europe should be more active in the Caspian, Middle East and Iran. However, the potential great powers are also highly interested in the resources in those regions. In order to gain

advantage over China, India and others, Europe should make agreements with these countries. However, guaranteeing the suppliers' support is not enough particularly when natural gas is considered. Transit countries are vitally important as well. For transporting energy from the Caspian and the Middle East, Turkey is the most reliable and cost-effective transit country. In that sense, Europeans should not regard Turkey as simply a partner whose support and confirmation is taken for granted. Europeans should respect Turkey's energy hub role as a candidate of EU membership.

CHAPTER I

A THEORY FOR ENERGY POLITICS

1.1. Theorizing the Study

A theoretical approach is a *sine qua non* for any academic study whatever the subject matter is. For a social sciences study in general and for an international relations study in particular, a theory constitutes the framework of a study. However, unlike the applied sciences, different theoretical approaches can be utilized to explain a similar subject within the context of social sciences. For example, the European integration process can somehow be explained by a federalist approach. This does not obstruct any further effort to explain the similar process by a liberal intergovernmental approach. Therefore, any theoretical approach that fits best to the research area should better be selected by the researcher as far as social sciences is considered.

Generally speaking, different theories can be applied to a research on energy security. For instance, it is possible to use a neo-functionalist approach in explaining energy policies of the EU with a reference to European Coal and Steel Community (ECSC). Similarly, a realist approach can also be plausible when the lack of a unique EU policy in energy issues is taken into consideration. Therefore, application of an existing international relations theory may help to establish a theoretical base for this study.

After the end of the cold war, many scholars have argued various approaches to explain the developments in international level. A vast range for theoretical approaches has been

discussed in academic circles in order to examine the changing structure of the international system. In this atmosphere, it is normally not so easy to determine which theory fits best to a research area. Fortunately, the nature of this study helps to overcome this challenge and provides a clear framework for defining the theoretical base of the study.

However, deciding the theory that can explain the energy policies of the EU and Turkey better is the crucial question for shaping the framework of this study. In answering this question a set of factors should be taken into consideration. As a result of the analysis of those factors, it is argued in this paper that a neo-realist approach fits for examining energy policies of the EU and the role of Turkey in EU's energy security. Without understanding the unipolar structure and the balancing mechanisms, it would be very difficult to understand the energy policies of international actors.

This section of the study, therefore examines the main arguments of realist school as well as the origins of neo-realist theory with respect to IR study. Further, the chapter introduces assumptions about the post-Cold War structure discussed among political science scholars particularly working on neo-realism. In doing so, the main purpose is to illuminate the features of energy politics as well as EU - Turkish relations from the perspective of this theoretical approach and its explanations about the post-Cold War structure of the international system.

1.2. Neo-Realism in General

As one of the most prominent international relations theory, neo-realism has roots in the classical realist theory. Like the traditional realist assumptions, neo-realism assumes states as the main actors of the system and the significant role of power in international politics. In addition, both realists and neo-realists argue that a condition of anarchy exists at international level. This means that there is no overarching central authority above the rule of sovereign states. All these conditions, according to the realist based theories, require a state to resort self-help in order to survive in an international order where a web of power relations is the most decisive factor for its own existence. Despite all criticisms from different authors in modern international relations disciple, neo-realism prevails to be one

of the most cited and dominant theory of the field.[2] Since neo-realism dominates the world of security studies, evaluating energy security issues from a neo-realist perspective may be justifiable. This justification will be clearer when the detailed analysis of the subject is provided in later chapters.

Realism has become one of the most commonly resorted international relations theories since the early twentieth century. Although inter-war period theorists Morgenthau and Carr have emerged as the dominant figures of this tradition, it has often claimed to have links with the works of former thinkers such as Thucydides, Machiavelli and Hobbes. As the name of theory implies, realism examines all the elements of international relations through the lenses of the real world. This makes it different from idealism, which can be evaluated as the ideological adversary of realism.

To have a more comprehensive understanding, it would be necessary to evaluate certain features of neo-realism that all the realist school theorists agreed on. These features may be explained under certain sub-titles which are; (1) the anarchic nature of the system, (2) state supremacy, (3) search for state survival, (4) the significance of power and (5) self help. A deeper analysis of these concepts is necessary to understand how a neo-realist approach fits into the issue of energy security and understand the energy politics among states. In the following chapters, specific references to the energy issues will be attached to the explanations about realist arguments in order to demonstrate the conformity of the theory to the subject matter.

1.3. Main Realist Arguments

1.3.1. The Anarchic Nature of the System

First of all, one of the most fundamental assumptions of realist school is the lack of a central authority at international level which causes an anarchic international system. In such an anarchic and lawless order where the actors cannot trust to others, the possibility of cooperation is normally limited and temporary. Neo-realism defines this situation as a

[2] Lamy, Steven L., 2006, "Contemporary mainstream approaches: neo-realism and neo-liberalism" in Baylis, John and Smith, Steve (eds.), *The Globalization of World Politics*: *An Introduction to International Relations,* Oxford: Oxford University Press, p. 205.

'state of perpetual international anarchy' in which states must ensure their security above all.[3]

This chaotic situation reinforces states to resort two main types of efforts. Internal efforts include increasing economic power, military capabilities and other similar strategies whereas external efforts requires strategies for strengthening own alliances and/or weakening rival alliances.[4] Since the ability to increase internal efforts is limited to the existing capabilities, resources, capital and human resources of a state, external alliances, i.e. alliances gain considerable importance in an anarchic structure. An alliance is defined by Stephen Walt as "a formal or informal arrangement for security cooperation between two or more states".[5] Generally speaking, the motivation behind forming an alliance is balancing the powerful state rather than ideology or historical relations of the actors. Therefore, security considerations are likely to take precedence and ideologically based alliances are not likely to survive when pragmatic interests intrude.[6] In line with this argument, the self-oriented energy security policies of EU members, which will be examined in the following chapters, clearly support the realist argument of the anarchic nature of the system.

1.3.2. State Supremacy

Secondly, realism covers the theories and approaches which set 'state' to the central position as the primary actor of international relations. With their trivial influencing capacity –as the realist assumption argues– other sub-state or trans-state organizations such as international institutions, multinational corporations or NGOs are not accepted as important international actors which may have a potential to influence the structure of the system. Although neo-realism does not specifically mention state as the unique actor, the system level approach that the theory suggests naturally introduces states as the principal

[3] This definition was initially used by Waltz and later supported by many other structural realists. See: Waltz, Kenneth N., 1979, *Theory of International Politics,* Massachusetts: Addison-Wesley Publishing, pp. 102-129.
[4] Lamy, *op-cit.,* pp. 208-9.
[5] Walt, Stephen M., 1990, *The Origins of Alliances,* Ithaca: Cornell University Press, p. 12.
[6] Lamy, *op-cit.,* p. 38.

units of international political system.[7] Despite the European Commission's efforts to forma common energy policy, developments within the member states depicts a clear support for neo-realist arguments. A detailed analysis of this evidence will be evaluated in the following part of this study.

Moreover, there is a special emphasis on great powers in neo-realist assumption. As Waltz puts it "the functions of states are similar, and distinctions among them arise principally from their varied capabilities… The units of such an order are then distinguished primarily by their greater or lesser capabilities…"[8] Then comes the importance of great powers which have been defined as the units with greater capabilities in a system. At the European level, the great powers are the bigger member states with more population, more economic strength and more military capabilities. This perception of realism also proves its relevance if we look at the voting mechanisms of the Union's decision making process. These great powers have more voting power than others. From the lenses of neo-realism, in short, the crucial point is to investigate the policies and interests of great powers. As a natural consequence of this fact, examining the policies of Germany, France, Italy and the UK as the leading powers in European integration, and their relations with the main natural gas suppliers of the continent are indispensable for this study. This is also in conformity with what well-known neo-realist John Mearsheimer described in the Europe's future:

> Five European States now have sufficient wealth and population to qualify as potential great powers: the United Kingdom, France, Germany, Italy, and Russia. Of these, however, only Germany has the earmarks of a potential hegemon. It is the wealthiest European state, has the second-largest population (after Russia), and has the most powerful army in the region. Nevertheless, Germany is not a great power today, much less a potential hegemon, because it has no nuclear weapons of its own and because it is heavily dependent on the United States for its security.[9]

In line with this classification, the following chapters will evaluate energy policies of these bigger members of the Union and comment on their policy preferences from the

[7] Viotti, Paul R. and Kauppi, Mark V., 1999, *International Relations Theory: Realism Pluralism, Globalism and Beyond,* Boston: Allyn and Bacon, p. 6.
[8] Waltz, Kenneth N., *op-cit*., p. 97.
[9] Mearsheimer, John, 2001, "The Future of American Pacifier", *Foreign Affairs,* Vol. 80, No: 5, September-October 2001, p.50.

lenses of structural realist elements such as balance of power, unipolarity versus multipolarity and EU's global actorness.

1.3.3. Search for State Survival

Another realist principle that all realists agree on is that the pre-eminent goal of the actors of international system is to survive in an anarchic world order. Without attaining this primary objective, all other goals of a state become meaningless and impossible to achieve.[10] However, the survival of a state can never be guaranteed because the use of force can be seen as a legitimate instrument for some countries when a threat is perceived. In an anarchic order in which states strive for survival, realists are skeptical about the universal moral principles and warn the leaders not to sacrifice state interests in exchange for ethical behaviors. This realist argument is known as the dual moral standards.[11] The moral standards at domestic level may completely differ from ethical standards at international level. An ethical political community may only prevail by the existence of a state, which includes a hierarchy in power relations between actors. The survival of a state in international politics cannot be bound up with the standards of individual ethical principles as in the case of domestic politics.[12] Therefore, cooperation, which can be easily achieved at domestic level, is something difficult to achieve at international level.

An international actor may be willing to cooperate as long as the benefits of the cooperation are at least equal to or more than the benefits of other international actors. In short, the possibility of cooperation in an anarchic political structure is limited to states' perceptions of their relative gains.[13] The evaluation of energy policies of EU members may also present sufficient data to confirm that state survival is an important element of policy formation process of member states, which will elaborately discussed in the following chapters.

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[10] Arı, Tayyar, 2004, *Uluslar arası İlişkiler Teorileri: Çatışma, Hegemonya, İşbirliği,* İstanbul: Alfa Yayınları, p. 199.
[11] Morgenthau, Hans J., 1939, "The Ressurrection of Neutrality in Europe", *The American Political Science Review,* Vol.33, No:3, pp. 483-484.
[12] Dunne, Tim and Schmidt, Brian C., 2006, "Realism" in Baylis, John and Smith, Steve (eds.), *The Globalization of World Politics*: *An Introduction to International Relations,* Oxford: Oxford University Press, pp. 174-5.
[13] Grieco, Joseph, 1988, "Anarchy and the Limits of Cooperation: A Realist Critique of the Newest Liberal Institutionalism", *International Organization,* Vol. 42, No:3, pp. 485-507.

1.3.4. The Significance of Power

Realist-based theories of international relations are the approaches that most frequently use power in their explanation. Realist thinkers focus generally on interest rather than ideology, and seek peace through strength rather than cooperation. The fourth common argument peculiar to realism, therefore, is the concept of interest defined in terms of power. Weber's definition of state as "a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory" suggests that power is accumulated in the hands of state initially.[14] A sovereign state has the sole authority over its own territorial limits. Then, as the various realist based schools argue, states search for power at international level.[15] In that sense, energy issues may properly be examined by using an analogous approach. States generally wish to control all the production of energy resources within their territories. Then they search for more energy resources out of their own territories. The sources of energy they controlled, provides them a considerable and tangible power in their relations with other states at the international system. Therefore, it can be asserted that this realist assumption is completely relevant for examining energy issues.

Moreover, power provides the ability to threat or use of force (if necessary) in order to get what a state seeks. In that respect, power is a strategic concept for the survival of a state in an anarchic environment. For realists, power has two specific features: Firstly, power is relational. A country can use power as long as there are other countries and a certain degree of relationship exists among them. Secondly, power is a relative concept.[16] This means that the calculation of own power is insufficient. The power of other actors should also be taken into consideration. Yet, without sufficient information, it is difficult to calculate power and capacity of others. This brings a complication of calculation. As the founder of neo-realism, Waltz preferred the use of capabilities in order to overcome the problem of power calculation and introduced some criteria to determine the level of power

[14] Gerth, H. H. and Mills, C. Wright, 1946, *From Max Weber: Essays in Sociology,* New York: Oxford University Press, pp. 77–78.
[15] Dunne and Schmidt, *Op-cit..,* pp.172-3.
[16] *Ibid.,* p. 173.

of an actor, which are (1) size of population, (2) size of territory, (3) resource endowment, (4) economic capability, (5) military strength, and (6) political stability and competence.[17]

From this point of view, energy resources have some direct and indirect effects on those criteria which Waltz argued as reference points for power calculation. Energy resources not only provide economic capability but also help to possess more effective military capabilities and secure a state by giving the ability to survive longer in a potential conflict. One of the most obvious examples for this argument is the Persian Gulf War between Iran and Iraq during 1980s. Both Iran and Iraq have had rich oil and gas resources and they had been listed among the important oil exporting countries. This energy trade had brought them certain economic capabilities. The economic welfare provided by energy sources helped these countries to have weapons and warfare equipment. As a result, when combined with other capabilities such as human capital and internal political stability, the war between these two neighboring countries lasted 8 years which is comparably a very long time for engaging a war in the late 21st century.[18] The energy resources that these countries possess are one of the main reasons that both Iran and Iraq could survive during such a destructive war. Therefore, it can easily be argued that energy issues are directly connected to the power politics and an analysis on energy politics can be constructed on a realist based theory.

Since neo-realism retains the power based approach of realism, it may be used as a theoretical ground for this study as well. Moreover, neo-realism may provide a more eligible framework compared to classical realism because the former does not perceive the need for power solely as an outcome which resulted from human nature. Neo-realism explains power as a tool rather than a goal which helps to survive. As it was mentioned above, energy resources constitutes a critical part of power for a state to survive, thus energy is a tool for a state to perpetuate in an international order which is characterized with anarchy. From this perspective, selecting a neo-realist based theoretical approach to energy seems to be a suitable framework for this study.

[17] Waltz, 1979, *op-cit..,* 131.
[18] For a more detailed analysis of the balance among parties of the war, see: Karsh, Efraim, 2002, *The Iran-Iraq War 1980-1988,* Oxford: Osprey Publishing, pp. 30-62.

1.3.5. Self-help

The concept of 'self-help' is another principle argument that all realist approaches agree on. This is also one of the central points that realist views diverge from its ideological counterpart liberalism which stresses the importance of cooperation among states in order to prevent war and survive in anarchy. However, as realists argue, in an anarchic world order which is the main characteristic of the current situation in international politics, 'self-help' becomes an essential element of state survival. As Waltz argues:

> To achieve their objectives and maintain their security, the units in a condition of anarchy –be they people, corporations, states, or whatever– must rely on the means they can generate and the arrangements they can make for themselves. Self-help is necessarily the principle of action in an anarchic order. A self-help situation is one of high risk – of bankruptcy in the economic realm and of war in a world of free states[19].

In his earlier work, Waltz also discussed the relevance of self-help in international relations with a reference to Rousseau's famous parable of stug hunt and contented that there is a lack of trust among states and individualistic behaviors of states prevail over collective goods when national interests are at stake.[20] As a result of self-help principle, states try to maximize their power –particularly in military sense– in order to provide their own security. This, in turn, causes an increase in feeling of insecurity among other international actors. In a spiral effect, others follow a similar path of securitization because of the self-help principle. Therefore, in a system characterized by self-help, a balance of power naturally emerges as a result of securitization efforts of the actors.[21]

In a self-help system, alliances constitute important parts of the structure because they help to check and balance the power within the system. Through the interaction of states, equilibrium of power is constructed automatically as a result of state behaviors. The Concert of Europe in the early nineteenth century and the Cold War are the most prominent examples of the balance of power.[22] Peaceful changes or wars shift the balance

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[19] Waltz, 1979, *op-cit.,* p. 111.
[20] Waltz, Kenneth N., 1959, *Man, State and War: A Theoretical Analysis*, New York: Columbia University Press, pp. 167-8.
[21] Dunne and Schmidt, *op-cit.,* p. 175.
[22] The concept of "balance of power" is one of the core elements of neo-realism. Waltz offered an explanation of balancing with his Theories of International Politics (1979). Further the discussion on balance of power evolved through a series of works put forth by neo-realists. Walt shifted the discussion the topic to

within a system which is generally restored by the formation of a new balance. This shift may even bring a structural change in the system. For instance, World War II changed the system into a bipolar international order as a result of a great fight among actors. On the contrary, after the end of Cold War, a peaceful change has been experienced at the system level and the structure has altered into a unipolar international system.

From the energy security perspective, the European states' behaviors and their relationship with energy suppliers depicts clear examples of self-help mechanism as neo-realism argues. Their policy preferences to provide security not only show a desire to diminish their dependency on imported energy resources but also an effort of balancing against the efforts to domination of the system by a hegemonic power which may pose great threat to their survival.

1.4. Neo-realist Breakthrough

Although neo-realist theory may be regarded as a derivative of realism, there are certain propositions that may be evaluated as the neo-realist contribution to traditional realism. First of all, neo-realism introduced a deductive approach to the classical inductive explanation of classical realism. Secondly, neo-realists have defined power in a much broader sense by utilizing this concept as a means of providing state survival rather than as an ambiguous and limitless objective of states. Finally, the third important contribution of neo-realism is the explanation of state reaction in a system which is characterized by the condition of anarchy.

1.4.1. Introduction of a Deductive Approach

The most important neo-realist contribution to classical realism is about "distinguishing factors internal to international political systems from those that are external." By introducing structural and unit level analysis, neo-realism argues the autonomy of international politics.[23] The former realist thinking about state's unilateral impact over

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a "balance of threat" in his Origins of Alliances (1987) whereas Mearsheimer introduced the offensive element to balance of power notion in the Tragedy of Great Power Politics (2001). The end of the Cold War further elaborated the debate over balancing which is discussed in the following parts of this section.

[23] Waltz, Kenneth N., 1990, "Realist Thought and Neo-realist Theory", *Journal of International Affairs*, Vol. 44, No.1, p. 29.

system was abandoned by the neo-realists. They argued a reciprocal interaction between the unit and the structure in an international system. In other words, the first break from traditional realism is a deductive approach introduced by the neo-realism. Morgenthau and other realists concentrated on the actions and interactions of states and those who take role in the decision making in the name of states. Realists strictly limited the direction of cause and effect relationship in international relations into one way. According to the realism, the outcomes at international level are resulted from the acts and interactions of states.[24] However, neo-realism's deductive approach introduced a distinction between structural and unit level causes and effects. As Waltz argues:

> International politics can be understood only if the effects of structure are added to traditional realism's unit level explanations. More generally, neo-realism reconceives the causal link between interacting units and international outcomes. Neo-realist theory shows that causes run not in one direction, from interacting units to outcomes produced, but rather in two directions.[25]

Neo-realism contends that international outcomes such as peace and war or alliance formation may have either unit level causes or have some causes located at structural level.[26] As Kenneth Waltz put forward in 1979, the interaction between the structure and units (states) is a mutual relationship. Figure 1 shows this interaction at system level. On the figure, $N_{1,2,3}$ represents states internally generating their external effects. $X_{1,2,3}$ represents the external effects of the states which interacts with each other at the system level. The circle represents the international system. In addition to the effects of units on each other and on the system, there are systemic affects on units as well, which in turn affects the internally generated actions of each unit.

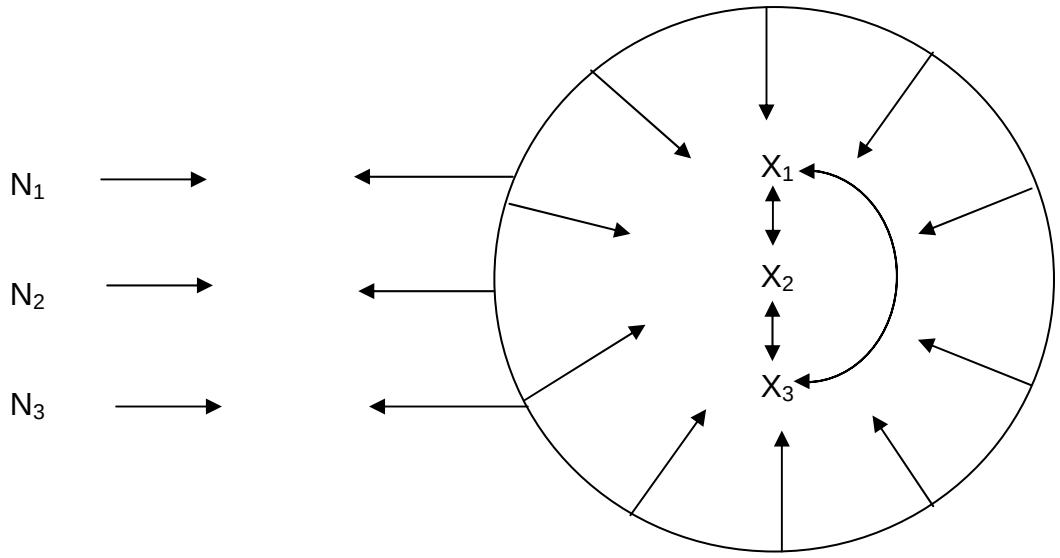
The concept of a system's structure, developed by Waltz, explains how the structure and variations in it affect the state's behavior. Therefore, interaction of states not only shapes the international structure, but also constrains them into certain type of behavior.

> The concept of structure is based on the fact that units differently juxtaposed and combined behave differently and in an interacting produce different outcomes… Structure defines the arrangement, or the ordering, of the parts of a

[24] Morgenthau, Hans J., 1972, *Politics Among Nations: The Struggle for Power and Peace, 5th ed.* , New York: Alfred A. Knopf, pp. 4-14.
[25] Waltz, 1990, *op-cit.,* p. 34.
[26] Dunne and Schmidt, *op-cit.,* p. 169.

system. Structure is not a collection of political institutions but rather the arrangement of them.[27]

Figure 1. Structure - Unit Interaction in Neo-realist Theory



N_1, N_2, N_3 : States in the international system
X_1, X_2, X_3 : External Effects of States

Source: Waltz, *Theory of International Politics*, p. 100.

The arrangement of units, first of all, gives a clue for understanding the structure of the system. The ordering principle of a system helps to understand how the parts are interacting. For instance, in domestic politics, the ordering principle is hierarchy while in international politics, it is anarchy. Waltz contended that the structure of the system is also shaped by the differentiation of units and the specification of their functions as well as by the distribution of capabilities across units. From this point of view, the prominent characteristics of international politics, unlike the domestic politics, seems to be the lack of order and organization. The number and capabilities of international organizations grow and supranational agents are becoming more effective, but as neo-realism argues, they cannot act in important ways unless the concerned states provide them the necessary support. Therefore, international structures, like economic markets, are formed by

[27] Waltz, 1979, *op-cit.,* p. 81.

interaction of self-regarding units. In other words, structures emerge from the spontaneous actions of coexisting states. From this point of view, the anarchic nature of international politics is the first determinant to comprehend the structure of the system.[28]

A second determinant that helps to define the system structure is the character of units. The states are the units of international political systems and are not formally differentiated by the functions they perform as it is in the domestic realm. Because the system is anarchic, no government or international rule can protect the actors against the aggression of other actors. Therefore, all of the units in a system have similar functions and implement similar actions in order to survive. There is no subordination based on functionality but capability in international politics. The units are functionally similar entities, yet vary widely in size, wealth, power and form.[29]

This distribution of capabilities among units of a system is the third determinant of system's structure according to the founding father of neo-realism. Instead of traditions, objectives, ideologies or form of governments of the states, the capabilities of the units are significant in determining the structure of the system.[30] Moreover, neo-realism pays particular attention on the number of major units within a system. Waltz contended that international structures vary with changes in the number of great powers. And great powers are differentiated from others by their combined capabilities they command. If a change takes place in capabilities, then the behaviors of states and outcome may change which in turn may cause a change in structure. To sum up, the idea that international politics is a system composed of a precisely defined structure and interacting units is the first and foremost departure of neo-realism from traditional realists.[31]

This kind of neo-realist explanation may help us to understand the activities of units in forming their energy policies. For instance, the foreign policies –thus the energy policies– of European powers were almost closely associated with the similar policies of United States during the whole cold-war period. As Anders Wivel clearly puts it, "convergence is the dominant characteristic of both Euro-Atlantic and intra-European behavior". Even after

[28] *Ibid.,* pp. 88-93.
[29] *Ibid.,* pp. 94-97.
[30] *Ibid.,* pp. 98-99.
[31] Waltz, 1990, *op-cit.,* pp. 29-30.

the end of the Cold War, the European actors have already not shown the ability to balance the United States. Therefore, their behavior can be defined as bandwagoning in realist terms.[32] In neo-realist explanation, bandwagoning describes the act of weaker states preferring to join the policies of a great power or coalition of powers in order to provide their own security. Bandwagoning is something in sharp contrast to the behavior of balancing.[33] In more concrete terms, the bandwagoning activities in transatlantic relations can be clearly understood from the modest military spending of European countries, their approval of most of the ad hoc US coalitions as well as their still continuing adherence and contribution to NATO. To reinforce this argument, some historical explanation may be fruitful. During the Cold War, neither Germany nor any other member of Western Europe dared to develop a special relationship with Moscow on energy trade, which would mean a great challenge to the Cold War policies of the US. At that time, the European actors did not have the possibility to balance any of the superpowers in a bi-polar world. Moreover, they could not be able to form a balancing coalition against the US or Soviet Union.

From this point of view, a neo-realist analysis of post-Cold War international system may contribute to comprehend the energy policies of actors. Waltz, for example, mentioned the structural change after the end of Cold War and evaluated the American hegemony in international relations:

> Peace is sometimes linked to the presence of a hegemonic power, sometimes to a balance among powers... Hegemony leads to balance, which is easy to see historically and easy to understand theoretically. That is now happening, but haltingly so because the United States still has benefits to offer and many other countries have become accustomed to their easy lives with the United States bearing many of their burdens… The American aspiration to freeze historical development by working to keep the world unipolar is doomed. In the not very long run, the task will exceed America's economic, military and political resources; and the very effort to maintain a hegemonic position is the surest way to undermine it.[34]

As it is clear in the words of Waltz, what neo-realism envisages for the future of international politics is a structural change in the system. The capabilities of the United

[32] Wivel, Anders, 2008, "Balancing against threats or bandwagoning with power? Europe and transatlantic relationship after the Cold War", *Cambridge Review of International Affairs,* Vol.21, No: 3, p. 295-296.
[33] Waltz, 1979, *op-cit.,* pp. 125-6; Walt, 1987, *op. cit. ,* p. 263-4.
[34] Waltz, Kenneth, 2000, "Intimations of Multipolarity" in Hansen, Berthie and Bertel Heuril (eds.), *The New World Order*, London: Macmillan, pp. 14-15.

States for maintaining the American hegemony over the system will be limited to a certain point, where balancing efforts from other actors will become overt. Then, the international political system may be transformed into a multi-polar structure, where several great powers will have almost equal power. According to realist arguments, Germany, France, the United Kingdom, and Italy are the potential great powers in Europe while China, Japan and India are the great power candidates of Eastern part of the world. Russia, as a country borders both Europe and Eastern Asia is another state which has a potential for becoming a great power in a multi-polar world.[35] Moreover, as Waltz argues, American aspiration to enforce balancing both in Europe and Asia will finally exceed United States' economic, military and political resources.[36] In such an international structure, European Union member states should define their policies according to the new power configuration because they will no more have the advantage of American security umbrella.

Despite the fact that Europe still has certain security ties with the US, it is not very abnormal for European countries to develop their own energy policies which constitute an integrated part of their foreign policies. From this realist point of view, many of the European Union members leaded by Germany and Italy have developed special energy relationship with the Russian Federation in order to secure their energy needs. This obviously confirms that there are system level effects on energy policies of the EU members. In other words, the change took place after the end of the Cold War enforces member states to adapt their policies in line with the requirements of the new structure of unipolarity. Therefore, during this period of US unilateralism of the post-Cold War period, EU members have shifted their foreign policies from bandwagoning to a more status que oriented policy.[37]

Although there are some exceptions as in the case of US invasion of Iraq in 2003,[38] general path of foreign policy formation of the European Union countries have been

[35] Mearsheimer, 2001, *op.cit.,* pp. 46-61.
[36] Waltz, 2000, *op. cit.,* p. 16.
[37] Despite the inexistence of any effort to counter the US hegemony in this period, recent studies in the field argues a new type of balancing activity, which was labeled as "soft-balancing".
[38] Because of the civilian power characteristic of the EU as well as the democracy notion among European countries, an effective opposition to American unilateralism has taken place in several member states. A split between major European powers during the American invasion of Iraq in 2003 was a prominent example of

somehow congruent to the US foreign policy. However, –particularly in the field of energy– the national foreign policy considerations of the member states are in line with what neo-realism argues about the post Cold War developments. The current international structure dominated by the American 'hegemony' may evolve into a multi-polar world in which bigger EU member states will assume great power status. This may clearly help to explain the reason why Germany, Italy and some other EU members have developed special relations with Russia and the reason why the European Commission continuously stresses the importance of searching for alternative routes from other energy rich regions. The future may also bring a rivalry and new alliance formations among European powers, Asian powers and the United States in a multi-polar international political system. Therefore, it is vitally important to secure energy for the European Union members if they will assume a greater role in a changed international setting.

1.4.2. A Broader Definition of Power

The explanation of the concept of power that neo-realism introduced is a second divergence of the theory from traditional realism.[39] In classical realism, the search for power is rooted in the human nature like conflict and war. Since there is a competition for scarce resources, a struggle for power is an ultimate consequence. For many realists, therefore, whatever the level of power an actor possesses, the desire for more power will prevail. Therefore, for classical realism, the rational behavior of a statesman is searching for as much power as possible. From this point of view, power is perceived as an end in itself and national interests are defined in terms of power.[40]

On the other hand, neo-realists, rather than viewing power as an end in itself, see "power as a possibly useful means, with states running risks if they have either too little or too much of it".[41] For neo-realism, insufficient power may provoke others' aggressive behaviors while excessive power may prompt others to search for increasing their

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this cleavage. For more details, see: Haseler, Stephen, 2005, *Super State: The New Europe and Its Challenge to America,* London: I.B. Tauris, pp. 52-54.

[39] For a detailed analysis of differences between realist and neo-realist perception of power, see: Tabarcia, Niculae, 2009, "Power Relations between Realism and Neorealism in Hans Morgenthau's and Kenneth Waltz's Vision", *Strategic Impact,* Issue: 4, pp. 79-85.

[40] Morgenthau, 1972, *op-cit.*, pp.8-10.

[41] Waltz, 1990, *op-cit.,* p. 36.

capabilities to feel themselves secure against the preponderant power. Therefore, the level of power should be balanced. Sensible statesmen would try to have an appropriate amount of power necessary to secure the state. Neo-realism also reminds that in crucial situations, the ultimate concern of states is not for power but for security. Moreover, the power in terms of capabilities of a state defines the characteristics of structure. The structure of the system and changes in structure is almost shaped by the distribution of power among the units. In short, the introduction of power as an instrument of providing security rather than an indeterminate target of an international actor is the second major contribution of neo-realism. [42]

In line with this broader definition of power that Waltz introduced into the theory of international politics, some other thinkers have also valuable contribution to neo-realist perception of power. Joseph Grieco and others criticized new liberal institutionalism and stressed the impact of relative power against international cooperation on foreign policy decisions of states.[43] According to the defenders of institutionalism, states are interested in increasing their power by obtaining absolute gains. States are also interested in cooperation with other international actors in order to increase their power. In contrary, according to neo-realists, states are inclined to calculate the relative gains in a cooperative action with other states. Therefore, anxiety of being cheated and relatively high gains of any other international actor are the most serious impediments against international cooperation. Similarly states may refrain from cooperation if the relative losses of the action are higher than other units in cooperation.

One of the most prominent examples for this situation may be the resistance of United States for not ratifying the Kyoto Protocol under the auspices of United Nations. The Kyoto Protocol aimed at combating global warming by a commitment of countries to reduce the level of four greenhouse gases, which causes environmental pollution. Although this commitment is evaluated as a burden on national economy by the signatory states, 187

[42] *Ibid.,* p. 36.
[43] For a detailed analysis of the absolute vs. relative gains discussions, see: Grieco, Joseph (1988), "Anarchy and the limits of cooperation: A realist critique of the newest liberal institutionalism", *International Organization,* Vol. 42, No:3, pp. 485-507; and Grieco, Joseph, Powell, Robert and Duncan Snidal (1993), "The Relative-Gains Problem for International Cooperation", *The American Political Science Review,* Vol. 87, No:3, pp. 727-743.

of the UN members have signed and ratified the protocol as of 2009. Despite signing the Kyoto Protocol, the US Government has neither ratified nor withdrawn from the process.[44] The American position against Kyoto Protocol is purely political and can be read in line with the realist argument of 'absolute versus relative gains'. In more concrete terms, the economic burden by implementing the Kyoto will bring much more burden on American industry than any other country, so that the US policy makers refrain from ratifying the protocol.

This neo-realist analysis of power may also help to explain the energy policies of European Union members. The energy requirements of the European states should be satisfied in some way or the other. Germany, for example, has a share of 12.5 percent of nuclear power in its total energy supply and could invest more on nuclear power as the French have already done. However, as explained above, too much power may irritate others about the intentions of states and provoke them to invest more on developing similar facilities. If Germany invests much more than the current level in developing nuclear energy, Russia or France may become anxious about the nuclear intentions of Germany. As Mearsheimer noted, "in a security competition among the great powers of Europe, Germany would probably become a potential hegemon and thus the main source of worry".[45] Similarly special relationship between Germany and Russia has already given rise to anxiety among other member states, particularly the states bridging between Russia and other EU members, i.e. Baltic countries and Poland.[46] Because energy resources directly contribute the capabilities of an actor, others would easily be irritated by the intention of that actor. That may be the main reason that, while searching for new energy supplies, the European countries follow a balanced energy policy and limit their efforts in order to set the other members' mind at ease over their actual intentions.

[44] For more detailed analysis of US policy with respect to Kyoto protocol and the climate change issues, see: Harris, Paul G., 1999, "Common but differentiated responsibility: The Kyoto Protocol and United States Policy, *N.Y.U. Environmental Law Journal,* Vol. 27, pp. 27-48; Electric Power Reseacrh Institute (ERPI) Climate Brief, 2000, *Cost of Kyoto Protocol to the United States: Implications of a Multi-Gas Strategy, http://globalclimate.epri.com/briefs/1001097.pdf.*

[45] Mearsheimer, 2001, *op-cit.,* p.52.

[46] Bowley, Graham, 2005, "Russian Sacrifice: Poland", *International Herald Tribune, 25 November 2005,* www.iht.com.

Furthermore, the member states have not reached an agreement on a common energy policy which would bind all member states even in their relations with supplier countries. The lack of common policy in energy clearly confirms realist argument of relative gains. Energy security is a vitally important phenomenon that member states are not willing to leave decision making into the other's discretion. The national interests of some member states are completely different from others as far as energy politics are considered. Thus, implementing a unique energy policy would increase the gains of some members at a lesser extend than the gains of other members. For example, a policy that favors special relationship with Russia and promotes increasing natural gas trade with this country may be very fruitful for Germany. However, the benefits of France from such a policy may be less than the benefits of Germany. Moreover, there would be no benefit from Portugal or Spain from such a policy. On the other hand, a policy favoring special relationship with North African suppliers may not be beneficial for Germany, but for all Mediterranean EU members. In such cases the relative gains of one or more member states against the others will be higher and this constitutes a real impediment against forming a unique energy policy at the Union level. In short, neo-realists understanding of power is quite different from both classical realist and liberal approaches, and is in conformity with the facts of energy politics.

1.4.3. The Reaction of States to the Condition of Anarchy

A third difference that neo-realism brought to the realist theory is about the unit level analysis. In realist thought, states are regarded as the main actors in international relations and they are unlike in the form. In other words, the states may have different government types, ideologies or their leaders may show different characters. Therefore, the behaviors of states acting in international arena naturally vary. Although agreed on this realist assumption, neo-realists further argued that states are made functionally similar by the limits of structure.[47] The power they obtain makes them different from each other. Neo-realists contended that the variation in the composition of states and their power does not have as much impact on international politics as realists argued because the logic of anarchy does not vary with the power configuration of states. It has an impact on the

[47] Waltz, Kenneth, 1991, "Realist Thought and Neo-Realist Theory" in Rothstein, Robert L., *The Evolution of Theory in International Relations,* Columbia: University of South Carolina Press, pp.36-7.

structure of the system. Therefore, the realist argument which concentrates solely on unit behavior has been criticized by the neo-realists and as previously mentioned they argued the effects of structures on unit behavior and outcome.[48] In other words, the reaction against a similar threat may vary not mainly because of the internal features of states, but because of their respective positions within the international political structure. For instance, the reaction of Germany against a threat perception would naturally be different from the reaction of Slovakia against the same threat. Germany may react by increasing internal efforts like enhancing the capabilities of its army.

On the other hand, Slovakia may prefer to react by using external efforts like bandwagoning. Put differently, the behavior of Germany against a threat may resemble much more to the reactions of China or India to the same threat rather than the reactions of Czech Republic or Slovakia. China and India are located geographically farther than Czech Republic or Slovakia to Germany. Moreover, the internal political structure of Germany resembles to Czech Republic and Slovakia much more than China and India. However, these facts have very little impact on foreign policy considerations. Germany and China would react very similarly against a threat in international arena and their foreign policy decisions would be much more similar because of their positions in international political structure. China and India are great powers like Germany, whereas others are secondary powers. As this example suggests, the perception of how states react to the condition of anarchy is the third contribution of neo-realism to the classical realist thought.

The developments of European energy politics may also be evaluated in line with this neo-realist argument. The EU continuously stresses the importance of market liberalization in different sectors of energy.[49] Among them, the Commission gives priority to the liberalization of electricity and gas markets, which will be discussed in the following chapters. Energy liberalization is an important issue for national security because in a liberalized energy market the control of energy resources may sometimes be delivered to the control of the companies of another country. If a member state goes too far in market liberalization while another state restricts market entry and protect the governmental

[48] Waltz, 1990, *op-cit.,* p. 37.
[49] Eikeland, Per Ove, 2004, "The Long and Winding Road to the Internal Energy Market–Consistencies and inconsistencies in EU policy", FNI report 8/2004.

control on its own energy market, then the former one may be open to external impact of other actors while the latter may protect its interests in energy issues. This may provide leverage to the former in economic terms as well which may change the power configuration at the end. In the light of this, it can be clearly stated that most of the bigger EU members have different implementation in the process of market liberalization. This is clearly in accordance with the neo-realist explanation. The great powers of Europe have different approaches to energy policy as a part of their security. The smaller member states on the other hand follow the policies of a great power which is most suitable to their own interest. For example, French government's defensive policy of merging two big energy companies of France in early 2008 was a counter unitary act against the Commission efforts to implement full liberalization.[50]

Moreover, Italian government is also inclined to protect ENI's dominance in its energy market. Besides the great powers of Europe, some other member states follow a similar policy to them. For example, Spain depicted a protectionist role in the acquisition process of national company Endesa by the Germany's energy giant E.ON.[51] Similarly, Austria holds more than one-third of the shares in OMV, which also concluded a deal with Iran on natural gas imports.[52] Andreas Pointvogl examines the driving factors of divergences in energy policies of the member states and categorizes them according to their market structure and policy priorities. In that research, it is clearly shown that the energy dependency levels of states as well as energy intensity figures have an impact on the behaviors of states in energy politics. The states with high energy dependency depict similar patters of action in their energy policies. All these developments in energy sector not only shows how the member states contradict with the Commission's efforts for developing a unique energy market and a common energy policy, but also clearly indicates the prompt explanation of unit behavior by neo-realism as explained above.

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[50] The shares of Gas De France and Suez are 21 and 22 percent respectively, while the French Government has a share of more than 35 percent of the of the total capital of the merged group. See, Modern Power Systems, 2007, *GdF and Suez to Merge,* Vol. 27 Issue 10, p. 7. ; GDF Suez: A Champion is Born, 2008, *Acquisitions monthly, 1 May 2008, www.aqm-e.com/story.asp%3Fstorycode%3D267522+ENI+bid+for+suez&cd=9&hl=tr&ct=clnk&gl=tr*

[51] Bilefsky, Dan, 2006, "EU tells Spain to drop Endesa sale conditions", *The New York Times,* 20 December 2006, http://www.nytimes.com/2006/12/20/business/worldbusiness/20iht-energy.html.

[52] OMV Corporate News, 2007,: OMV and National Iranian Oil Company: Heads of Agreement for participation in the Iranian South Pars Gas Field and Iran LNG Project, 21 April 2007, www.omv.at.

It is clear that the assumptions of neo-realism mentioned above have proved its relevance for explaining the energy politics at the international political level. Yet the post-Cold War events had great impact on international politics, so that the critics and evaluation of neo-realism should be correctly examined in order to understand the current developments in energy security policies of the European Union member states and Turkey's role within this respect.

1.5. Neo-realism in the Post-Cold War Period

The clear and simple explanation of the international political system that neo-realism introduced was quite impressive during the Cold-War years. However the sudden change in international system by the dissolution of the Soviet Union has completely changed the perception of neo-realism. The initial arguments of the post-Cold War period envisaged by the prominent figures of neo-realism were harshly criticized even by some of the proponents of structural realism.[53] Then, different explanations for the post-Cold War period have been developed by neo-realists. Since then, the scholars of this theory have tried to fill the gaps in neo-realism in order to explain the increasing power of United States and the reaction or lack of reaction of other states in the new unipolar structure. Therefore, before evaluating energy policies of European Union countries and Turkey, the systemic effects on the foreign policy behaviors of these actors should be clearly understood.

1.5.1. Neo-realist Explanation in early 1990s and Critics

As mentioned previously, neo-realism has been a very influential theoretical approach and has introduced several significant propositions of which are accepted even by its adversary theoretical paradigms such as all variants of liberal and institutional theories. Almost all the prevailing theories of the day concur that the world system is anarchic and

[53] Waltz, as the founder of the theory, was the most criticized of neo-realists. Waltz foresaw a swift shift to multipolarity and the collapse of NATO just after the end of the Cold War. (See: Waltz, Kenneth N., 1993, "The Emerging Structure of International Politics", *International Security,* Vol. 18, No: 2, pp. 44-78.) The events took place in the following years, however, showed differences from what Waltz stipulated in early 1990s. For a critical challange to the neo-realism explanation, see: Ashley, Richard K., "The Poverty of neorealism", *International Organizations*, Vol. 38, No:2, pp. 225-286; Ruggie, John G. "Continuity and Transformation in the World Polity: Toward a Neorealist Synthesis," *World Politics,* Vol. 35 No:2, pp. 261-285; Vazques, John, *The Power of Power Politics: From Classical Realism to Neo-traditionalism,* Cambridge: Cambridge University Press, 1998, pp. 317-369.

there is no superior institutional structure above the nation states. Furthermore, nearly all theoretical approaches agree on security concerns of states which direct them to the search for power.[54]

In contrast, another neo-realist argument has drawn widespread criticism both from opponents and proponents of realism. It is the 'balance of power' concept which envisages the coexistence of two or more states seeking preservation of their own in a self-help system where no superior agent to come to the aid of the states that may be weakening.[55] In such an anarchic system, the balance of power theory defines constraints of the system as well as the actions and motivations of states within the system. As a result the theory expects the formation of a balance of power among actors either using internal or external efforts. The founding father of the theory also mentions that the expected behaviors, i.e. the responses of states to the structural constraints, of actors are generally similar, yet not identical because of the different national responses within states.[56] In other words, the balancing of the system may depend on various factors and therefore may develop in different ways. In light of this description, realists view balance of power system as something similar to the laws of nature: a normal expression of international power and the best guarantee of peace rather than liberal explanation as a means of collective security, which would be intensified by the use of international institutions.[57] In line with this explanation, Grieco argued that "states define balance and equity as distributions of gains that roughly maintain pre-cooperation balances of capabilities".[58] Put another way, even if the states engage in cooperation, they naturally consider the balance of power within the system. In realist terms, any potential exchange between states must exactly preserve the pre-existing balance of power.[59]

In line with this explanation, most neo-realists expected a change in the structure of international system at the end of the Cold War. As early as 1990, Mearsheimer argued

[54] Legro, Jeffrey W. and Moravcsik, Andrew, 1999, "Is Anybody Still a Realist?", *International Security,* Vol. 24, No:2, pp.20-22.
[55] Waltz, 1979, *op-cit*., pp. 117-8.
[56] *Ibid.*, pp.122-3.
[57] Burchill, Scott, 2001, "Realism and Neo-realism" in Burchill et.al., *Theories of International Relations,* Hampshire: Palgrave Macmillan, pp. 72-5.
[58] Grieco, 1988, *op-cit*., p. 501.
[59] Rousseau, David L., "Motivations for Choice: The Silence of Relative Gains in International Politics", *Journal of Conflict Resolution,* Vol. 46, No:3, p. 394.

that "the prospects for major crises and war in Europe were likely to increase markedly after the end of Cold War". [60] He also reminded that multipolarity will replace the existing structure if the superpowers leave Europe and the new structure would be more prone to violence when compared to bipolarity.[61] He further questioned the 'Balkanization of Europe' and argues in a very certain way that multipolarity will emerge in the new European order. Moreover, he defined the peace in Europe as a function of distribution of power and distribution of nuclear capabilities among European powers, and evaluated potential patterns of distribution in detail.[62] Similarly, Waltz agreed with Mearsheimer and accompanied by further argument on defining future great powers at the global scale. Waltz contended that Japan, China and Germany –or a West European State- may become great powers in a ten to twenty years period. Furthermore, he also argued the fall of Russia from the great power status because of its economic incapability.[63] There were also some other scholars defending neo-realist arguments. As a reaction to the neo-liberal and neo-conservative suggestions for perpetuating unipolarity in order to maximize American interests, Christopher Layne argued that unipolarity is a geographical interlude that will give way to multipolarity in the first decade of 21st century. Layne emphasized the adverse consequences of hegemonic efforts and added that states balance against hegemonic power even if that preponderant power behaves in a benevolent manner rather than coercive implementations.[64] In plain terms, balancing against the American power in the existing structure is an unavoidable consequence that the US policy makers should take into consideration.

As mentioned above, neo-realists' explanations about the post-Cold War period have been faced to widespread criticisms. In the early 1990s, idealist approaches challenged realist paradigm and condemned its explanations capacity as inadequate. Holsti described realism as "an anachronism that has lost much of its explanatory and prescriptive power"

[60] Mearsheimer, John J., 1990, "Back to the Future: Instability in Europe after the Cold War", *International Security,* Vol. 15, No: 1, pp. 5-6.
[61] *Ibid.*, p.7.
[62] *Ibid.*, pp. 31-40. Mearsheimer examined four future scenario: Europe without nuclear arsenal, continuation of the current status of nuclear weapons, well-managed nuclear proliferation or the opposite.
[63] Waltz, 1993, *op-cit*., pp. 50-61.
[64] Layne, Christopher, 1993, "The Unipolar Illusion: Why New Great Powers Rise", *International Security,* Vol. 17, No: 4, pp. 5-51.

in the post-Cold War order.[65] Similarly, Kegley criticized realism for being inadequate in the aftermath of bipolar structure and argued the relevance of neo-idealist explanations in the new international order.[66] In that period, even defenders of realists, such as Jervis, questioned the adequacy of realism as a guide to understand the future international politics.[67] The number of criticisms intensified through the end of the decade as a result of the developments in international relations such as increasing U.S. unilateralism, the continuation of American presence in Europe and Asia and NATO's expansion to the Eastern Europe. Keohane, for example, criticized Waltz in particular and neo-realists in general for underestimating the role of institutions and therefore misinterpreting the end of Cold War.[68] Keohane supported his argument by Waltz's forecast about the dissolution of NATO in the absence of an adversary.[69] Legro and Moravcsik, on the other hand, criticized defenders of realism who seek to address anomalies by recasting realism in forms that are theoretically less determinate, less coherent and less distinctive to realism.[70]

1.5.2. Extended Unipolarity and Theoretical Adaptation

As a reaction to numerous critics both from splinter groups and external quarters such as liberal institutionalism, democratic peace school and constructivism, neo-realists have withstood and reconfirmed the unipolarity of the structure and developed some explanations for the delay in a shift to multipolarity.[71] According to Huntington, the emerging would was best described as a 'uni-mutipolar' structure with United States as a superpower and with six other major powers, which were: the Soviet Union, Japan, China,

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[65] Holsti, O. R., 1991, "International Systems, System Change, and Foreign Policy", *Diplomatic History,* Vol. 15, pp. 84-88.
[66] Kegley, Charles W., 1993, "The Neoidealist Moment in International Studies? Realist Myths and the New International Realities", *International Studies Qarterly,* Vol. 37, No: 2, pp. 131-146.
[67] Jervis, R., 1992, "A Usable Past for the Future" in Hogan, M.J., *The End of the Cold War: Its Meaning and Implications*, New York: Cambridge University Press, pp. 266-268.
[68] Keohane, Robert and Waltz, Kenneth N., 2000, "The Neo-realist and his Critic", *International Security,* Vol. 25, No:3, pp. 204-205.
[69] Waltz stated in his 1993 paper that "NATO's days were not numbered, but its years were" and contended that NATO will disappear after the American withdrawal from the continent. See, Waltz, 1993, *op-cit*., p.76.
[70] Legro and Moravcsik, 1999, *op-cit*., pp.5-55.
[71] Snyder, Glenn, H., 2002, "Mearsheimer's World – Offensive Realism and the Struggle for Security", *International Security,* Vol. 27, No:1, p.149.

Germany, the UK and France.[72] Moreover, Waltz clearly argued once more that the system will turn into a multipolar structure:

> The twentieth century has been unique in modern history; for three centuries the structure of international politics remained multipolar, in the twentieth century it has changed three times. Multipolar at the outset, it became bipolar after the Second World War, unipolar with the disintegration of the Soviet Union, and as the new millennium dawns it is gradually becoming multipolar once more.[73]

Consistent with his early works[74], Waltz rejected the criticisms over neo-realism's inability to explain the developments in international politics about the post-Cold War period. NATO's expansion, in that respect, is not a rational move in neo-realist view. For Waltz, "adapt statesmen keep their countries' potential adversaries divided. The American administration seems to delight in bringing them together."[75] As the NATO enlargement continues towards Russian border, Russian's perception about benign intentions of the United States will fade away. Then, as Waltz argued, this will have some particular undesirable consequences: [76]

Firstly, it will put additional costs on NATO which will be assumed mostly by the United States. Secondly, it will probably provoke Russia in a balancing effort and which in turn alienates Russia and nudges this country toward China. In a contrary scenario, increased military spending of Russia may have similar side effects in other regional settings since Russia has neighborhood with China and Japan. When Russia starts military improvement, these two countries may perceive a threat from Russia and may engage military build-up. Therefore Waltz and most of the other realists diverged completely from American administration's policies and mentioned the absence of rationale behind the idea of perpetuation of unipolarity, which requires the United States to avoid the emergence of new great powers.

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[72] Huntington, Samuel P., 1994, "America's Changing Strategic Interests", in Betts, Richard K., *Conflict After the Cold War: Arguments on Causes of War and Peace,* New York: Macmillan, p.508.
[73] Waltz, 2000, *op-cit*., p.1.
[74] In his masterpiece, Waltz contended that "theory, as a general explanatory system, cannot account for particularities." See Waltz, 1979, *op-cit*, p. 118.
[75] Waltz, 2000, *op-cit*., p.5.
[76] Waltz, Kenneth N., 2000, "Structural Realism after the Cold War", *International Security*, Vol. 25, No:1, pp. 5-41.

In the challenging atmosphere of the new century where United States had become the dominant superpower like a hegemon, another realist scholar made a great contribution to neo-realism. By introducing an explanation for the behaviors of revisionist states, Mearsheimer did not supersede but complement Waltz's theoretical approach in his masterpiece.[77] In his 'offensive realism' Mearsheimer builds his theory on neo-realist arguments such as security seeking states in an anarchic international environment and a competition for power in order to guarantee survival. Different from Waltzian structural realism, Mearsheimer emphasized that power maximization for security is the main motivation of states and clarified the vague security maximization understanding of neo-realism. Mearsheimer's point about power is also in conformity with what Gilpin argued two decades ago. In 'War and Change in World Politics', Gilpin argued that leading great power "will attempt to change the international system if the expected benefits exceed the expected costs."[78]

In other words, instead of defensive realists' status quo oriented way of maximizing security, states prefer to maximize their share of world power in which the ultimate goal is to be the hegemon in the system by searching for opportunities to gain power at the expense of others.[79] In the way of global hegemony, the initial step of a state is to seek regional hegemony. The second step of a great power is to maximize the amount of the world's wealth that the country controls. Developing a powerful land forces accompanied by nuclear capabilities constitute the next two steps necessary of the path to global hegemony.[80] In short, there are no status quo powers in Mearsheimer's world and all great powers are revisionist. Therefore, potential hegemons always aspire to be hegemons, and they will not stop increasing their power until they succeed. From this point of view, Mearsheimer enlarged the scope of neo-realist theory by introducing a theoretical rationale for the behavior of revisionist states.[81]

[77] Mearsheimer, John J., 2001, *The tragedy of Great Power politics,* New York: W.W. Norton & Company.
[78] Gilpin, Robert, 1981, *War and Change in World Politics,* Cambridge: Cambridge University Press, pp.50-106.
[79] Mearsheimer, 2001, *op-cit.* p.21, p.410.
[80] *Ibid.*, pp. 138-147.
[81] Snyder, 2002, *op-cit*., pp.152-158.

By the historical cases that Mearsheimer examined as a test of his theory of offensive realism, he clearly put forth that only regional powers are status quo oriented and great powers are revisionist.[82] Most of these historical cases proved the theory by showing sufficient evidence that great powers do not engage self-denial as long as they have sufficient capability to shift the balance in their favor.[83] However, two cases, namely the United Kingdom and the United States, show difference from other examples by not searching for domination despite the existence of sufficient capabilities. The reason of not attempting to conquer territory in Europe or Asia by these two powers is attached to the lack of territorial neighborhood. For Mearsheimer, the English Channel for United Kingdom and Atlantic and Pacific Oceans for the United States raised difficulty of projecting military forces across the water.[84] Since none of the great powers have ever had the military capability to become a global hegemon, regional hegemony emerges as the ultimate goal of powers. As a result of this, both United Kingdom and the United States behaved as an 'offshore balancer' in order to inhibit the rise of any other great power to emerge as a regional great power. [85]

In addition to balancing, Mearsheimer argued buck-passing[86] as an alternative strategy of states against aggressors. If possible, passing the buck is an advantageous strategy because it protects the buck-passer, but the potential hegemon and balancing countries will be torn in case of a war. As Mearsheimer argued, the historical examples are various.[87] From this point of view, offensive realism also regards bandwagoning as contradictory with the basic principle of realism that states are searching for maximizing their relative power. Therefore, great powers rarely bandwagon.[88] In light of all these explanations, offensive neo-realists have developed some conclusions about the developments took place in international politics. First of all, they clearly observed that Cold War allies of the Western world are drifting apart as a result of structural developments. In other words, the

[82] The cases examined are: Japan from 1868 to 1945; Germany from 1862 to 1945; the Soviet Union from 1917 to 1991; Italy from 1861 to 1943; Great Britain from 1792 to 1945; and the United States from 1800 to 1990.
[83] Mearsheimer, 2001, op-cit., pp. 172-209.
[84] *Ibid.*, pp. 234-238.
[85] *Ibid.*, pp.238-266.
[86] Buck-passing describes the efforts to stay out from direct conflict with the aggressor while another state directly involves a conflict or war with potential hegemon.
[87] *Ibid.*, pp.267-359.
[88] Snyder, 2002, *op-cit*., pp.162-3.

disappearance of Soviet threat, changing trade relationship between Europe and the United States as well as demographic changes and elite perceptions have diverted the transatlantic allies from each other.[89] The improvement of such a divergence will naturally end up with an increase in defense capabilities of potential great powers of Europe. As Mearsheimer contended:

> The United Kingdom, France, Germany and Italy are slowly but inexorably realizing that they want to provide for their own security and control their own destiny. They are less willing to take orders from the United States than they were during the Cold War. Japan, too, is showing signs of independent behavior. Moreover, the American commitment to defend Europe and Northeast Asia shows signs of weakening… America's military role in those two strategically important areas is likely to diminish, not increase.[90]

The signs of transatlantic friction might be evaluated as a balancing against the preponderance of United States. However, by the turn of the century, many neo-realists were questioning the existence of a balancing effort against United States. Generally speaking, the discussions were not centered on whether the structure will turn into a multipolar structure, but rather the reasons for the absence of balancing against the United States. In other words, with a few exceptions, most of the realists have agreed on that the structure of international politics will gradually turn into multipolarity. However, the discussion is about the reasons of underbalancing. Explanations of realists are various ranging from the benign intentions of United States to the domestic politics of other states.

One of the most commonly expressed explanation for the lack of balancing against a potential global hegemon is the power differences between actors. As Wohlforth examines in detail, the qualitative and quantitative gap between the superpower and other potential great powers is unprecedented. The United States is the only state in modern international history with a clear preponderance in all the underlying components of power: economic, military, technological and geopolitical.[91] Therefore, because of the massive gap in

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[89] Despite neo-liberals such as Nye argued that the cleavages between Atlantic partnership is temporary, most realist analysis have discovered the opposite. See Nye, Joseph, 2000, "The US and Europe: continental drift?", *International Affairs,* Vol. 76, No:1, pp.51-59; Walt, Stephen M., 1999, "The Ties That Fray: Why Europe and America are Drifting Apart?", *National Interest*, Vol. 54, pp. 3-11; Cohen, Roger, "Storm Clouds ove US-Europe Relations", *New York Times,* March 26, 2001.

[90] Mearsheimer, 2001, *op-cit.,* p. 391.

[91] Wohlforth, William C., 2000, "The Stability of a Unipolar World", in Brown, Michael, et.al., *America's Strategic Choices: Revised Edition,* Cambridge, Massachusetts: The MIT Press, pp. 273-290.

capabilities, any countervailing challenge must be strong enough to produce a structural change. A second reason that Wohlforth argued is the geographical advantage of the United States against the threat of others. He termed Atlantic and Pacific oceans as the most trustworthy allies of America, therefore highlighted the difficulty of posing threat on the United States.[92] As a result, the U.S. role as an offshore balancer helps to prolong the unipolar moment.

Mearsheimer stressed another important element of great power behavior, which causes off-balancing within the international system. Mearsheimer reminded that "the United States has no appetite for conquest and domination outside of the Western Hemisphere" which is in conformity with the neo-realist premise of "offshore balancers do not provoke balancing coalitions against themselves."[93] However, Mearsheimer also added that this does not mean that Americans will not pose any threat to other major powers. "United States is also sure to pursue policies that will raise doubts about whether it is a wise and reliable ally, if only because U.S. interests are not identical to those of its allies" as in the case of Kosova Crisis of 1999.[94] In addition, Mearsheimer as well as some other scholars argue that the American security commitment is an important determinant on other states' policy preferences. According to this view, others prefer the United States not to resort offshore balancing and withdraw from the continent. Therefore, they were reluctant to balance the United States.[95]

In the early 2000s, there were also some liberal institutionalist scholars interested in explaining the absence of balancing. John Ikenberry, for instance, argued that institutional arrangements bind the US and allies together, which limit the superpower's ability to either threaten or abandon its major allies.[96] Ikenberry's argument was suffered from an institutional plea which realism clearly puts forth: Institutions reflect the interests and policies of the states that create them. Similar institutionalist approaches were falsified

[92] *Ibid.*, p.296.
[93] Mearsheimer, 2001, *op-cit*., pp. 391-2.
[94] *Ibid.*
[95] See, Mearsheimer, 2001, *op-cit.,* Chapter. 10; Wivel, Anders, 2008, "Balancing against threats or bandwagoning with power? Europe and the transatlantic relationship after the Cold War", *Cambridge Review of International Affairs,* Vol.21, No:3, pp. 289-305.
[96] Ikenberry, G. John, 1999, "Institutions, Strategic Restraint, and the Persistence of American Postwar Order," *International Security,* Vol. 23, No:3, pp. 47-78.

after the American invasion of Iraq in 2003 without having a mandate from the United Nations.

Another explanation for the absence of any serious attempt to balance U.S. power has been expressed by another prominent figure of neo-realism. Stephen Walt argued that explanations of Waltzian structuralism about the half-hearted and ineffective balancing efforts were unable to explain the post-Cold War period. On the other hand, Walt's 'balance of threat' theory suggests an alternative that help to explain current 'situation of off-balance'.[97] In the late 1980s, Walt developed a theory which he claimed that it fills the gaps within the structural theory.[98] Walt examined the European diplomatic history and the U.S. foreign policy as well as the alliance commitments in the Middle East and concluded that 'balance of threat theory' can best explain the international politics. According to this theory, states balance against the states that pose the greatest threat even if that state is not the most powerful in international arena. Whereas balance of power theory centered on imbalances of power, Walt's theory predicts that when there is an imbalance of threat, states will increase their own capabilities or form alliances. Similar to the criteria defined in balance of power theory, Walt argued the existence of four criteria which states use in threat perception:

First one is state strength which is determined by the size, population and economic capabilities of potential aggressor. Geographical proximity of the threatening state, its offensive capacities as well as aggressive intentions are the other criteria that states evaluate when they perceive a threat from another state. [99] In short, Walt's balance of threat theory argues that states do not necessarily balance against the most powerful, yet against the one that they perceive threat.

In his explanation for the post Cold-War balancing, Walt again resorted to the balance of threat theory. In doing so, Walt did not argued that balance of power is a misleading

[97] Walt, Stephen M., 2002, "Keeping the World "Off-Balance": Self-Restraint and U.S. Foreign Policy" in Ikenberry, G. John, *America Unrivaled: The Future of the Balance of Power,* Ithaca: Cornell University Press, pp. 124-6.
[98] The initial idea about the balance of threat theory was presented in 1985. See Walt, Stephen, 1985, "Alliance Formation and the Balance of World Power", *International Security,* Vol.9, No: 4. Walt developed the theory in his famuous book. See Walt, Stephen M., 1987, *The Origins of Alliances,* Ithaca: Cornell University Press.
[99] Walt, 1987, *op-cit.,* pp.147-180.

theory, but incomplete because power is only one of the four determinants of balancing. His explanation for the absence of balancing against U.S. is mainly based on the fact that other major powers do not perceive United States as an aggressor threatening their security. In his analysis, Stephen Walt initially questioned whether the level of U.S. power is quite above the cumulative power of other major states or not. Besides this, being geographically located far from other regional settings decreases the level of other's threat perception. Despite its preponderance in military and economic power, it is not so easy for the United States to implement offshore operations. This fact, according to Walt, helps the United States to be regarded as a benign superpower. As the balance of threat theory envisages states that acquire specific military and/or military capabilities will pose, ceteris paribus, greater threat to the security of other powers. In other words, if a state has more offensive military capabilities, others will be more inclined to perceive threat from that country. In that respect, the power projection capabilities of America are quite threatening for the rest of the major powers. An overt example, according to Walt is the reaction of Russian, Chinese and European leaders against the national missile defense strategy of the U.S.

Furthermore, the First Gulf War, Kosovo Crisis of 1999 and war in Afghanistan were clearly put the ability of United States to project over long distances. As a final criterion, Walt questioned the perception of U.S. intentions by the others. When compared with previous dominant powers, United States has depicted a 'comparatively benign' power in its relations with other regional actors. Considering all these criteria, therefore, it is not a matter of what United States has, how others respond will depend actually on what they think the United States will do. In short, Walt contended that the non-existence of balancing is a consequence of calculation of American threat by major powers on the basis of these criteria. The final evaluation revealed that perception of major powers about the U.S. intentions is currently positive, yet it may change as a result of a change in America's policy preferences in the future.[100]

In light of these neo-realist remarks on post-Cold War structure, some policy recommendations were developed by neo-realist scholars. Since states search for more

[100] Walt, 2002, *op-cit.,* pp. 133-141.

power for more security, the dominant state's search for hegemony may be understandable in a unipolar world. Therefore, any attempt (including unilateral actions) by the United States in order to develop an American hegemony might be expected as a probable outcome.

However, the prominent neo-realist theorists reached a consensus on a different approach, which suggests more security for the United States. First of all, the role of America as a pacifier is vitally important in different regional settings. In Europe, the absence of U.S. forces may pose a security threat to Germany and cause rapid armament in Germany. In turn, Russia, France and at a lesser extent UK would become anxious about Germany's intentions. This process would go to the proliferation of nuclear arms, which means a turn from benign bipolarity to unbalanced multipolarity in Europe. The same scenario may be relevant for Northeast Asia in case of a powerful hegemonic development of China. Because China would become a more formidable superpower than the U.S., America should better contain China rather than searching to integrate this country to the world economy.[101]

In short, according to neo-realist arguments, the United States should not follow an idealistic approach that would help the Chinese economy to develop incredibly and should provide a balancing mechanism both in Europe and Northeast Asia in order to prohibit the emergence of a regional hegemon, which would turn into a peer competitor to the United States. This task will probably exceed the economic, military, demographic and other capabilities of America in a near future and therefore, the United States should not provoke any balancing efforts and coalitions by implementing neo-conservative policies.[102] In doing so, the United States should use its power with forbearance, and refrain if possible. Moreover, it should resort multilateralism more frequently and take other major powers' interest into consideration. Thus, United States should emphasize defense and eschew offense in its relations with others in order to keep the world 'off-balance'.[103]

[101] Mearsheimer, 2001, O*p-cit.,* pp. 392-402.
[102] Waltz, 2000, *Structural Realism…,* pp. 35-39.
[103] Walt, 2002, *Op-cit.,* pp. 141-152.

1.5.3. Post 9/11 World and Theoretical Implications

During the discussions among scholars of international politics about the durability of unipolar structure and neo-realist explanations about the post-Cold War developments, a dramatic but historically unprecedented event took place in September 2001. Formerly perceived as a 'safe haven', the United States has turned into a potential target that can be shot on its own soil. The ambiguity of the source of terror inhibited the superpower to reciprocate with a massive assault. However, the 9/11 attacks have a much severe consequence: the terrorist assaults on strategic American targets created an incentive on the Bush Administration to pursue a more neo-conservative path which has been highly criticized by most of the neo-realists.[104] In the lack of a specific target to counteract terrorists, the U.S. foreign policy makers decided to march in Afghanistan in order to destroy the Al-Qaeda camps as well as its Taliban supporters.

The initial American operations started just one month after the 9/11 attacks without a UN mandate and the only supporter was the United Kingdom.[105] Within the first year of the Afghanistan operations, American leadership decided to continue 'the war on terror' by fighting with 'the most prominent supporter' of anti-American activities, who has been alleged by America to possess nuclear weapons.[106] Despite vigorous efforts of many of the major powers to stop or at least delay the American invasion of Iraq, United States has started the conquest of Iraq in early 2003. The American invasion, of course, did not receive a support from UN Security Council.

In light of these developments, another theoretical debate emerged in academic circles. The neo-realist arguments were once more questioned on the basis of increased American unilateralism and absence of any counter-balance efforts by other countries. Just after both

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[104] Neo-realits are generally opposed to aggressive policies such as war in Iraq, which entails the danger of high U.S. ccasualties, significant civilian deahts, a heightened risk of terrorism or increased hatred of the U.S. in the Arab and Islamic World. In that sense, it is not interesting that most of the forecasts of neo-realists have taken place during the War in Iraq. See Mearsheimer, John J. and Walt, Stephen M., 2003, "An Unnecessary War", Foreign Policy, Jan/Feb. 2003, No: 134, pp. 50-9.

[105] Ameircan's argued that they acted with a "clear right to self defense" under Article 51 of the UN Charter. See "Bush announces opening of attacks", 2001, *CNN.* Retrived on September 18, 2009 from: http://archives.cnn.com/2001/US/10/07/ret.attack.bush/.

[106] Bumiller, Elisabeth and Dao, James, 2002, "Cheney Says Peril of a Nuclear Iraw Justifies an Attack", *New York Times,* 27 August 2002. Retrieved on September 18, 2009 from: www.nytimes.com/2002/08/27/international/middleeast/27IRAQ.htm

war in Afghanistan[107] and invasion of Iraq[108], United States has been blamed for ambitious plan to control the energy resources of the Middle East and the Caspian. Whatever the underlying reason of the United States, these two successive unilateral operations of the United States have irritated not only the potential rivals of the superpower, but also its Cold War allies. As a result of those intentions, the neo-realist theory would assume other major powers to develop a balancing strategy against the United States. As discussed above, the existing preponderant power of the United States when combined with unilateral acts with aggressive intentions, other major powers (including the European allies) should perceive a great threat of American hegemony.

However, there were no concrete examples of balancing efforts on the side of other powers. In such an atmosphere, some scholars searched again for the merits of non-balancing and reiterated the relevance of neo-realism by developed new explanations for the current situation. In efforts to explain the noticeable absence of balancing, Little found out that the meanings of the term 'balance of power' differs from one scholar to other. Some writers regarded the balance of power as an unavoidable byproduct of anarchy while some others perceived it as a unifying element of a stable and cooperative international society. After an intricate analysis on the approaches of prominent realist figures, Little contended that balance of power is not an immutable law of nature.[109] However, most of the liberal as well as realist believe that balancing is an indispensable element of international politics and the reasons of current situation of non-balancing should be clearly understood.

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[107] Gökay makes an analysis on the discussions about the "hidden intentions" of the United States in Afghan war. According to some comments, the plans for Ameiran offensive in Afghanistan were not resulted in as a response to September 11, yet existed prior to the terroist attacks. See Gökay, Bülent, 2002, "The Most Dangerous Game in the World: Oil, War and the U.S. Global Hegemony" in *Alternatives: Turkish Jorunal of International Relations,* Vol. 1, No: 2, pp. 47-68.

[108] There were severe criticism particularly from Islamic countries and a part of Europe that the intrinsic purpose of United States was to secure its oil demand. See Linzer, Dafna, 2004, "Poll Shows Growing Arab Rancor at U.S." *Washington Post,* July 23, 2004, A26. Walt also mentioned about polls showing a majority of other country citizens think that "the actual desire of America is to control Middle East reserves". See Walt, Stefen M., 2005, "Taming American Power", *Foreign Affairs,* Vol. 84, No:5, p.107. However, there were also opposite ideas that the most prominent motivation for the United States was security, not energy resources. See, Mueller, John, 2005, "The Iraq Syndrome", *Foreign Affairs,* Vol. 84, No: 6, pp. 44-54.

[109] Little, Richard, 2007, *The Balance of Power in International Relations: Metaphors, Myths, and Models,* Cambridge: Cambridge University Press.

One of the most interesting explanations about the balancing discussions clearly emerged in mid-2000s. Some scholars argued balancing to be implemented by other major powers, yet in a different form.[110] In an analysis of soft balancing, Paul argued that unilateralist strategies to prevent the emergence of a peer competitor at global level as well as the Middle East and Central Asia policies of the United States had already irritated the traditional allies in Europe as well as former enemies such as Russia or China. These second-tier major powers, on the other hand, have not engaged in forming countervailing alliances and/or arms build-ups as a balancing effort. These powers, according to Paul, are confident that United States will not directly pose threat because it is constrained "by a multitude of factors, including: internal democratic institutions, domestic politics, and above all, the possession of nuclear weapons by some second-ranking powers."[111] In that sense, they have employed an additional strategy to the existing bandwagoning, buck-passing and free-riding. These second-tier major powers engage in "soft-balancing, which involves the formation of limited diplomatic coalitions or ententes with the implicit threat of upgrading their alliances if the United States goes beyond".[112]

Another scholar has also concluded a similar argument about the activities of major powers and asserted that the major states and some other regional states are already engaging in the early stages of balancing behavior against the United States. The high costs of hard-balancing measures such as military build-ups or defense alliances enforce these countries to pursue more moderate means of balancing. These measures include indirect challenges such as using non-military means to delay, frustrate or undermine unilateral policies of the United States, mainly by resorting international institutions, economic statecraft and trade as well as diplomatic arrangements.[113] Both Paul and Pape underline main reasons for the lack of balancing. Paul argued that the liberal characteristics of U.S. political system and of its hegemonic behavior constitute one of the main reasons for non-balancing. He also stressed the absence of a counter military capability in the aggregate of

[110] In a previous analysis, Walt argued the possibility of "a host of lesser actions other states can still undertake in order to complicate U.S. calculations and constrainits freedom of action. See Walt, 2002, *op-cit.,* p. 128.
[111] Paul, T.V., 2005, "Soft Balancing in the Age of U.S. Primacy", *International Security,* Vol. 30, No: 1, pp. 46-47.
[112] Ibid., pp.47-8.
[113] Pape, Robert A., 2005, "Soft Balancing against the United States", *International Security,* Vol. 30, No: 1, pp. 7-10.

other states' possession as a second reason of non-balancing.[114] Since U.S. does not impose a direct threat to others' security, they do not prefer to risk their relations with the U.S. in a more interdependent world. "The fundamental goal of balance of power politics is to maintain the survival and sovereign independence of states in the international system; a related objective is not allowing any one state to preponderate".[115] In that sense, according to Pape, states do not prefer balancing the United States. Pape made a further analysis and explain the incapability of others by two main reasons:

Firstly, a balancing coalition against an extraordinary power requires including most or possibly even all of the second-tier major powers. Secondly, convincing all these powers to attend such an alliance is actually very difficult. Pape also agreed by Paul that the benign intentions of the United States that others perceive have contributed the continuation of current unipolar situation. However, the perception of others may easily change in a unipolar world. Since the threshold for a unipolar leader to be perceived as 'aggressive' is lower than a major power in a multipolar world, modest relative gains or unilateral policies of the unipolar leader may be regarded as 'threatening acts' by others.[116] Joffe has also contributed the soft balancing debate by arguing that soft balancing has begun with the collapse of Soviet Union in 1991. For Joffe, the earlier examples of soft balancing was seen when the United States regularly found itself alone on the discussions about ABM Treaty or the International Criminal Court.[117]

After examining the reasons of balancing vs. non-balancing, Pape analyzed types of balancing that may be implemented by other major powers if they perceive threat. The capability of other major powers in a unipolar structure is limited when compared to the leading country. Therefore, internal balancing is not a viable option for a major power since it entails a risk of a harsh response by the unipolar leader. The only reliable option, thus, is engaging in external balancing efforts, which entails serious difficulty of coordinating as well as the risks of entrapment or collective failure. In light of this,

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[114] Paul, op-cit., p. 48-51.
[115] Gulick, Edward Vose, 1955, *Europe's Classical Balance of Power,* Ithaca: Cornell University Press, pp.31-3.
[116] Pape, op-cit., pp.11-5.
[117] Joffe, Josef, 2003, "Gulliver unbound: can America rule the world?". *The Twentieth Annual John Bonython Lecture,* Sydney: Centre for Independent Studies. Retrived on 26 July 2009 from http://www.smh.com.au/articles/2003/08/05/1060064182993.html.

balancing against a superpower is a timely process because it requires high level of coordination among interests and collective action of second-ranked states. Pape's explanation about the steps of major powers' balancing efforts is quite helpful in understanding the situation:[118]

> The logic of unipolarity would suggest that the more aggressive the intentions of the unipolar hegemon, the more intense the balancing by second-ranked states, to the extent balancing is possible at all. If the unipolar leader does not pursue aggressively unilateral military policies, there should be little balancing of any kind against it. If, however, the unipolar leader pursues aggressive unilateral military policies that change how most of the world's major powers view its intension, one should expect, first, soft balancing and, if the unipolar leader's aggressive policies do not abate, increasingly intense balancing efforts that could evolve into hard balancing.

In light of the balancing behavior, the newly developed balancing trend in unipolarity is expected to be illuminated by neo-realists. Before that, one of the main neo-realist principles should be reminded. As Waltz argued that unipolarity appears as the least durable international structure, "a dominant power may behave with moderation, restraint and forbearance. Even if it does, however, weaker states will worry about its future behavior… As nature abhors a vacuum, so international politics abhors unbalanced power. Faced by unbalanced power, states try to increase their own strength or they ally with others to bring the international distribution of power into balance."[119] When the reality of balancing combined with Walt's explanation of balance of threat[120], the relative tranquility of post-Cold War period becomes more meaningful. In more concrete terms, the major powers –namely Russia, China, Japan, Germany, France and to some extend the United Kingdom and Italy- are intrinsically uneasy with the current state of unipolarity. However, the comparably moderate foreign policy intentions of the leading unipolar power, the United States, do not provoke them to follow a direct balancing policy.[121]

On the other hand, this does not mean that the U.S. is a completely benign power working purely for civilian purposes. Rather, Americans have pursued quasi-imperial policies in a different form when compared with previous hegemonic powers. Put

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[118] *Ibid*., pp. 16-18.
[119] Waltz, "Evaluating Theories", 1997, *American Political Science Review,* Vol. 91, No:4, p. 915.
[120] Walt, 2002, *op-cit.*, pp.127-9.
[121] Paul, *op-cit.*, pp. 53-5; Pape, *op-cit.,* pp.19-20.

differently, 'incoherent empire' or 'reluctant superpower' of the post-Cold War follows a 'soft imperialist' path. [122] When this trend combined with post 9/11 policies of Bush administration, the other major powers (probably except for the United Kingdom) has become more anxious about American intentions. Pape explained this period as "the United States' changing reputation". [123]According to some neo-realist scholars, the result of U.S.'s change in policy towards a preventive war has been an intensification of balancing efforts by other major powers in a form of 'soft balancing'. Pape defined soft balancing as "the utilization of tools to make a superior state's military forces harder to use without directly confronting that state's power with one's own forces."[124]

In other words, soft balancing involves strategies to stop or delay the use of force by using non-military means. Walt made a similar definition of soft balancing: "conscious coordination of diplomatic action in order to obtain outcomes contrary to U.S. preferences, outcomes that could not be gained if the balancers did not give each other some degree of mutual support."[125] In line with these definitions, Paul argued that second-tier powers have been pursuing limited, tacit or indirect balancing strategies against the United States. They frequently prefer to use coalition building or diplomatic bargaining within international institutions. Denying the UN approval to U.S. led interventions by using the veto power in UN Security Council is the most prominent example of this sort. This strategy helps major powers to challenge the legitimacy of U.S. interventions. Moreover, the absence of UN approval led many potential allies to refrain from supporting an action without 'collective legitimation'. In this respect, Paul examined the American intervention in Kosovo in 1999 and concluded that although soft balancing efforts of mainly implemented by Russia and China did not prevent an intervention, they were able to influence the post-intervention settlement. [126]

In a similar analysis for the invasion of Iraq in 2003, Paul put forth that the reaction of Germany, France and Russia against the American and British efforts for a UN support to

[122] Mann, Michael, 2003, *Incoherent Empire,* London: Verso, pp. 1-18.
[123] Pape, *op-cit.* p. 23-5.
[124] *Ibid.,* p. 36.
[125] Walt, Stephen M., 2004, "Can the United States Be Balanced? If So, How?", Annual meeting of the American Political Science Association, Chicago: APSA. Retrieved on 15 June 2009 from http://www.allacademic.com/meta/p59968_index.html
[126] Paul, *op-cit.,* pp. 58-64.

invasion was an example of soft balancing. This unofficial coalition engaged in an intense diplomatic balancing, which resulted in an internationally illegitimate intervention made by the U.S. One of the main motives behind this reaction was the concerns of European major powers that "the Westphalian Sovereignty norm will be challenged by the U.S. intervention in Iraq".[127] Different from Kosovo, American intervention in Iraq received opposition by a larger group of countries including the European major powers, which in turn decreased the legitimacy of the operation into question.

Pape had also depicted a similar approach. He elaborated four main mechanism of soft balancing, which are: territorial denial, entangling diplomacy, economic strengthening and signaling to resolve to participate in a balancing coalition. Different from Paul, Pape believed that major regional actors are also contributing the balancing efforts. For instance, Turkey and Saudi Arabia firmly denied the U.S. to access their territory and posed difficulty to the United States in logistic terms. Turkey was strategically important for an effective operation and the U.S. was expecting Turkey to accept its request to use its territory. Turkey's reluctance in decision making process and refusal at the end not only increased the cost of North Iraq operation for the United States but also delayed the intervention. What Turkey and Saudi Arabia did, according to Pape, is actually soft balancing by using territorial denial. In Pape's approach, a second mechanism of soft balancing took place when France, Germany and some other major European powers applied institutional procedures in the UN to prevent or at least delay the intervention. In other words, "French, German and Russian policies on Iraq was not for saving Saddam, but containing the American power, liberated from the ropees of bipolarity"[128].

Furthermore, Chinese and South Korean efforts to elevate their role in diplomatic negotiations with North Korea have been regarded by Pape as a similar diplomatic entangling mechanism.[129] Moreover, Pape argued also that soft balancing may be more ambitious in two ways. With respect to first one, Pape required other states to press hard for UN rather than the United States to oversee the administration of oil contracts in Iraq in order to limit the U.S. freedom in Iraq. In addition to this, some activities in the field of

[127] *Ibid.,* pp. 64-69.
[128] Joffe, *op-cit,* pp. 16-18.
[129] Pape, *op-cit.,* pp. 36-41.

economics may also help to a decrease in the relative power of the United States. A clear example may be to have a consensus on buying oil in Euros. The GNP of the United States will be inevitable affected from currency change at around 1 percent.[130] Increasing economic relations between China and the EU may further provide similar results.[131] Therefore, economic strengthening of others may be another way of soft balancing, which may also give some clue to the U.S. administration about the balancing efforts of others. In line with this, Pape envisages a final mechanism of soft balancing which will help others to control U.S. Also as step of a shift from soft balancing to the traditional hard balancing, other states may signal to resolve in a balancing coalition. Encouraging and support to U.S. opponents such as Iran or North Korea can be the examples of giving a signal to the superpower. [132]

As Paul noticed the continuation of soft balancing efforts culminated in a partial victory in June 2004 and enforced the United States to adopt a UN resolution[133], which delivered partial sovereignty to the Iraqi government. This was a result of diplomatic bargaining among the United State, United Kingdom, France, German, and Russia. In that sense, Paul argued that hard balancing is not automatic in the anarchic world, but is a function of major power reaction against the hegemonic behavior of leading state.[134] Therefore, as long as they receive threat from the U.S., they will be more inclined to balance the superpower. This is also in conformity with what Walt envisages for soft balancing:

> Soft balancing could also lay the groundwork for more fundamental challenges to U.S. power. States that coordinate positions on minor issues may become more comfortable with each other and better able to collaborate on larger issues, and repeated successes can build the trust needed to sustain a more ambitious counter-hegemonic coalition. Thus, successful soft balancing today may lay the foundations for more significant shifts tomorrow. If other states are able to coordinate their policies so as to impose additional costs on the United States or

[130] *Ibid.,* p. 42.
[131] Cui, Zhiyuan, 2004, "The Bush Doctrine: A Chinese Perspective", Held, David and Koenig-Archibugi, Mathias, *American Power in the Twenty-first Century,* Cambridge: Polity, pp. 241-251.
[132] Pape, *op-cit.,* p.42.
[133] United Nations adopted a resolution stating "Security Council Endorses Formation of Sovereign Interim Government in Iraq; Welcomes End of Occupation by 30 June, Democratic Elections by January 2005. See UN Resolution 1546 (2004), SC/8117, retrieved on 15 June 2009 from: http://www.un.org/News?Press/docs/2004/sc8117.doc.htm.
[134] When the others perceive that leading superpower is a revisionist state rather than status quo power, the balancing efforts begins to emerge. Paul, *op-cit. 70-71.*

> obtain additional benefits for themselves, then America's dominant position could be eroded and its ability to impose its will on others would decline.[135]

On the other hand, some other scholars criticized the ideas about soft balancing and argued that there is no balancing at the current international structure. Brooks and Wohlforth criticized defenders of soft balancing on the basis of the lack of empirical basis and argued that any behavior that complicates the U.S. policies as soft balancing. The analysts, according to them, failed to address alternative explanations for the constraint actions of other major states. In that sense, Brooks and Wohlforth explained four types of explanations instead of soft balancing: (1) economic interests, (2) regional security concerns, (3) policy disputes and bargaining, and (4) domestic political incentives.[136]

The first alternative explanation of Brooks and Wohlforth argues that economic gains of a state and/or domestic interest groups or business elites may cause the actions that constraint the U.S. In that sense, Moscow's eagerness to sell weaponry to Beijing and New Delhi is not something related to an endeavor to balance the U.S. threat, but rather because of economic expectations of the Russians. Similarly, Brooks and Wohlforth further agued that since Iranians pay cash and nuclear projects costs high, Moscow-Tehran relations should be examined in the same manner rather than discussing soft balancing[137].

Secondly regional and transnational challenges such as organized crime, terrorism, drug trafficking and refugee flows may cause incentives for major powers to enhance their power capabilities. Therefore regional challenges that they face may enforce them to take precautions which also limit the unilateralist actions of the United States. The rapprochement among Russia, China and India under the Shanghai Cooperation Organization is an obvious example. Instead of explaining it as a balancing effort, Brooks and Wohlforth underlines the importance of regional challenges such as the need for confidence building among the new states in the region, resolution of border disputes, Islamic extremism and other minority issues. Furthermore, regional challenges are also one of the numerous reasons for increasing relations between Russia and Iran. Moscow, in that

[135] Walt, Stephen M., 2004, *op-cit*.
[136] Brooks, Stephen G. And Wohlforth, William C., 2005, "Hard Times for Soft Balancing", *International Security,* Vol. 30, No: 1, pp. 72-80.
[137] *Ibid.,* pp. 88-90.

sense, needs Iranian cooperation at least in resolving the question of exploitation of natural resources in the Caspian.[138]

Thirdly, sincere domestic political concerns of politicians of regional actors or major powers may invoke actions constraining the United States. One of the examples for this trend is the European Union's efforts to develop military capabilities free from U.S. influence. Brooks and Wohlforth, regard European efforts in developing a military capability as an issue of domestic politics because independent EU foreign policy is popular among public opinion in Europe. In addition, they also regard EU's efforts as a result of regional security concerns rather than balancing. Furthermore, the opposition of traditional allies in the case of Iraqi War was not regarded as a soft balancing effort by Brooks and Wohlforth as well. The domestic political concerns of Chancellor Schröder and Prime Minister Erdoğan were the main reasons of strict opposition in those countries.[139]

Last but not least, disagreement with specific U.S. policies rather than pure balancing incentives may also present another reason for actions that constrain the United State. The most obvious example of this forth explanation is the French opposition to the Iraqi War. According to Brooks and Wohlforth, the main reason of French stance was not necessarily to check the increasing U.S. influence and power, but to enhance France's ability to bargain over specific policy responses to global security issues. In short, these four explanations put forth by Brooks and Wohlforth questioned the relevance of soft balancing discussions.

Moreover, Lieber and Alexander have also criticized defenders of soft balancing. According to their view, the other major powers are not implicitly balancing the superpower but they engage in a behavior of typical diplomatic friction. Moreover, improving U.S. relations with major powers such as China, Russia, India and some other regional actors such as Egypt, Jordan, Pakistan and Saudi Arabia may prove the opposite of balancing. With respect to this understanding, Lieber and Alexander pointed out four of

[138] *Ibid.,* pp. 83-6, 88.
[139] *Ibid.* Pp. 91-101.

the explanations of soft balancing and argued that these are examples that cannot effectively be distinguished from routine diplomatic friction.[140]

Their first criticism is about entangling international institutions as a way of soft balancing. With reference to Schweller, they reiterate a realist claim which argues incapability of institutions "to be autonomous and to take decisions binding on strong states".[141] Since powerful state can control institutions, it is unreasonable to expect them to restrain the powerful state. Moreover, entangling institutions could be regarded as soft balancing if any of the major powers sought to use institutions to block the American intervention or at least to declare the invasion as an illegal act.

Lieber and Alexander secondly criticized the lack of validity about the assumption of economic sanctions implicitly implemented on U.S. as a way of soft balancing. They concluded that there is no serious study about the impact of oil sales in Euro on American economy. Moreover, they reminded that the United States, with its huge market, constitutes an attractive trade partner those who are assumed to be in a balancing effort.

Thirdly, Lieber and Alexander argue that territorial denial as a way of soft balancing is not a proper understanding of the current situation. According to their view, the diplomatic developments about new offshore bases run contrary to the assumptions of soft balancing. "Since September 11 the United States has established new bases and negotiated landing rights across Africa, Asia, Central Asia, Europe and the Middle East."[142]

Finally, supporting the opponents of U.S. as a way of soft balancing is also criticized by Lieber and Alexander. Similar to Brooks and Wohlforth, they also contended that these activities may be related to other causal motives. In more concrete terms, economic benefits may be the main motivation of Russia to support the Iranian nuclear program rather than a vague balancing effort. Similarly, support of South Korea to North may be

[140] Lieber, Keir A. and Alexander, Gerard, 2005, "Waiting for Balancing: Why the World is not Pushing Back", *International Security,* Vol. 30, No.1, pp. 109-115.
[141] Schweller, Randall, 2001, "The Problem of Interantional Order Revisited: A Review Essay", *International Security,* Vol. 26, No:1, p. 182.
[142] Lieber and Alexander, *op-cit.,* p. 128.

evaluated as a regional security motivation rather than explaining by a pure balancing logic.[143]

In sum, according to Lieber and Alexander, events used in explaining the presence of soft balancing were typical in history and there is actually no balancing in unipolar system. Their explanation for this absence lies behind the "highly selective but not broadly threatening grand strategy of the U.S. in the post 9/11 world"[144]. In that sense, other powers perceive the power of United States as indispensable for defeating the shared threats of nuclear proliferator states and global terrorist organizations.[145]

As a reaction to criticisms on explanations about the soft balancing efforts of major powers, some other scholars of international politics declared their support to Walt, Paul, Pape and other neo-realists arguing the existence of balancing against the U.S. Robert Art, for example, replied both Brooks and Wohlforth as well as Lieber and Alexander and criticized them for conceptualizing balancing in a very narrow manner. His critics centered on two cases that depict the existence of balancing in the prevailing unipolarity. One of them is Chinese balancing, which Art evaluated as internal efforts and the other is European Security and Defense Policy of the EU, which is regarded as external effort by Robert Art.[146]

In his counter argument, Art stated that even if Russian arms sales to China is not motivated by balancing, Chinese intention could not be limited to have a bargaining power over the Taiwan Strait as Brooks and Wohlforth argued. Moreover, Art also mentioned that "Russia is aware of the effect of its arms sales on China's military capability"[147]. Art also argued that Brooks and Wohlforth misunderstood balancing by evaluating China's cooperation with U.S. as an anomaly for great power balancing. Mixing balancing and cooperation with another major power was also implemented as a policy choice by the

[143] *Ibid.,* pp. 129-30.
[144] *Ibid.,* p. 133.
[145] *Ibid.,* pp. 130-3.
[146] Art, Robert et.al., 2005/06, "Correspondence: Striking the Balance", *International Security,* Vol. 30, No. 3. pp. 177-8.
[147] *Ibid.,* p.178.

United Kingdom against Germany during the second half of 1930s. Therefore it is not an anomaly.[148]

A second point that Art is diverged from Brooks and Wohlforth as well as Lieber and Alexander is about European balancing efforts. According to him, "Europeans are at an earlier stage of balancing against the United States than China and have less to show for it"[149]. Art also criticized those scholars for ignoring the consequences on balancing if Europeans achieve their targets in ESDP.[150] Moreover, the argument on non-exisitence of balancing efforts by the Europeans that based on their low military spending levels is not relevant because their perceptions are different. China prefers internal efforts, while EU members are engaged in external efforts. In other words, they do not increase their military spending at member state level, but they prefer to pool their capabilities together under a new type of European alliance. Therefore, they are balancing through external alignment.[151]

In conclusion, some current steps of major powers actually deserve to investigate from the lenses of neo-realist theory. These behaviors were not present prior to the increased American aggression with the emerging unipolar structure of the post-Cold War era. In that sense, Christopher Layne's words may help to conclude:

> At the end of the day, what the administration trumpets as 'victory' in the Persian Gulf may prove, in reality, to have pushed NATO into terminal decline, given the decisive boost to the political unification of Europe (at least the most important parts of it), and marked the beginning of the end of America's era of global preponderance. [152]

Particularly the 9/11 attacks and U.S. intervention to Iraq further complicated the debate on balancing. Therefore, explaining the anomaly with a new concept of soft balancing may be regarded as acceptable.

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[148] *Ibid.,* pp. 178-80.
[149] *Ibid.,* pp. 180-1.
[150] *Ibid.,* p.180-1.
[151] *Ibid.,* p. 194-5.
[152] Layne, Christopher, 2003, "America as European Hegemon", *National Interest,* Issue 72, p. 28.

1.5.4. Explaining Energy Politics in Europe and Turkey's Role from a Neo-realist Perspective

Some of the existing policies and activities of European countries in the area of energy evaluated with respect to the fundamental principles of neo-realism. As it is obviously put forth, the behaviors of European Union members in particular and Union in general have always been in conformity with the main arguments of neo-realism. Therefore, neo-realism seems to be a proper tool for examining European energy structure and Turkey's contribution within this scheme. In doing so, the developments in theory after the end of the Cold War should also be taken into consideration. The energy policy of member states, therefore, should be evaluated with reference to the current debate on balancing. In other words, all the arguments that neo-realism put forth may help someone to explain the current developments in energy security policies at European level.

Since this study has a neo-realist conceptual framework, there will be two levels of analysis: First one is the unit level analysis which evaluates the relations between individual actors and their energy policy choices. Second one is the system level analysis which considers the impact of system on unit behavior. In more concrete terms, the energy requirement of Germany enforces the country to develop special relations with Russian Federation. The gigantic gas reserves of Russia and the proximity of that country to Germany are important elements of this rapprochement. However, these reasons are not sufficient to explain the particular relationship between Russia and Germany in which Germany has become heavily dependent on Russian gas. There must be some other motivators to explain the energy policies of major European powers. From this point of view, the interpretation of energy politics with respect to effects of the system on units should be taken into consideration.

In more concrete terms, the change in the structure of the system affects the policies of actors. Germany, previously preferred bandwagoning during the Cold War, has perceived the change in the structure of the system accurately and adopted its foreign policy to the new situation. Along with the change in foreign policy, Germany's priorities in energy policy have also changed. Therefore, the system level effects should be considered as imperatives for Germany's increased energy relationship with Russia. The positions of

other major European powers will be evaluated in a same manner in the following parts of this study.

Moreover, the role of Turkey should be evaluated from this point of view. Turkey's geo-strategic position may present a special role to the country in a new political structure. Some of the bigger member states of the EU may assume great power status in a potential multi-polar international structure. Located as a hub between rich energy sources and European countries, Turkey may become not only an important part of European energy strategies but also foreign policy. Therefore, Turkey's positioning within the political perspectives of European powers depends on the perception of those countries about a shift in the system to multi-polarity as well as their willingness to become a global actor.

European powers, through the EU, have assumed a global role and they are in a process of re-defining their relationship with the United States after the end of Cold War. From this point of view, Europeans have engaged in special relationship with oil and gas rich Middle East countries which are labeled as 'rogue states' by the U.S.[153] Since the Europeans need energy resources in the Middle East, Turkey may probably the most reliable partner not only as a bridge between Eastern resources and Western markets but also as an island of stability in the Middle East's chaotic political structure. Furthermore, neo-realist explanations about balancing and evolving through a multi-polar structure may also be confirmed by the increased efforts of Chinese government to make long-term energy agreements with African oil producers such as Sudan.[154] In short, all major powers are in search for securing the necessary energy resources which is at the heart of economic prosperity and military development.

In light of this international structure, all of the efforts by EU members, particularly the leading member states, will be evaluated with respect to neo-realist explanations in the further parts of this study. Moreover, their relations with Russian Federation will be considered as well as the role of China and other emerging great powers of a potential multi-polar international structure in the future. The impact of policies implemented by

[153] Ayman, Gülden, 2001, *Neo-Realist bir Perspektiften Soğuk Savaş Sonrası Yunan Dış Politikası: Güç, Tehdit ve İttifaklar*, Ankara: Stratejik Araştırma ve Etüdler Milli Komitesi, pp. 16-17.
[154] Goodman, Peter S., 2004, "China invests heavily in Sudan's oil industry", *Sudan Tribune,* 23 December 2004, retireved 18 September 2008 from http://www.energybulletin.net/node/3753.

energy producing countries will also be evaluated to understand the global energy politics. Finally, with respect to those developments in international level, Turkey's position in European energy politics will be detailed as well. The following chapter introduces European Union's energy outlook in general and then provides detailed information about energy policies of four of the main European powers: Germany, France, Italy and the United Kingdom. The policies expressed in governmental documents are mainly evaluated in that part as well as a general supply and demand structure of those countries. The next chapter provides an overview of Turkey's energy policies in the new energy environment. A particular emphasis is given to the current developments which may support Turkey's ambitious efforts to become a bridge of energy between East and West. Finally the last section will examine all the efforts of actors from a neo-realist point of view and offer some conclusions in line with this theoretical perspective.

CHAPTER II

ENERGY POLICIES OF THE EUROPEAN UNION AND MEMBER STATES

2.1. General

This part of the study does not solely concentrate on the energy policies of the EU, but also the policies of the Member States. All the areas related with energy policy cannot be under the control of EU, and the member states retain considerable discretion in implementing their own energy policies in line with their national interests.

This chapter starts with statistical data about European energy needs, consumption trends, own resources, the suppliers and future prospects. Then the policies and initiatives at EU level are examined in the second part of the chapter. The second part also covers the instruments that the EU utilizes in implementing its energy policy. The final part of this chapter evaluates energy policies of Member States. Since the Member States retain certain level of competences in this field, the positions of them in energy issues are worth to consider.

However, studying each and every detail of the energy policies of all member states would run the main argument of the thesis out of track. For this purpose, only the energy policies of the four leading states, namely Germany, France, Italy and the UK, are taken into consideration. These four countries are selected not only because they are the main

four energy consuming member states, but also they are described as the potential great powers in a regional multi-polar system in Europe.

2.2. Energy Outlook of the EU

Energy outlook of an entity may be evaluated from two main perspectives: Energy demand and energy supply. As far as the demand side is considered, the EU members are listed among the most energy consuming countries in the world. The aggregate demand levels of the EU members have also depicted a diversified profile among different member states. The new members have a consumption trend for the benefit of their economic and industrial growth, whereas the Western European countries have a different energy consumption trend based on transportation, heating, services sector and households mostly thanks to the modernization investments in industrial sectors. In short, EU countries require huge energy sources because of high level of consumption rates in member states.

The EU's own energy resources, however, are unable to meet the excessive demand level of the members. In order to satisfy the energy demand, EU imports most of its hydro-carbon energy resources from foreign countries. Even if Norway is not considered as a non-EU source of energy supply, almost half of the oil and natural gas are imported from other regions. As far as gas is considered, Russia and Algeria are the main suppliers, whereas Middle East and Africa has always been the main oil supplier for the European countries. Other energy sources such as coal, nuclear, renewable or solar energy will not be covered in detail because of several reasons.

Firstly, in attaining the other resources, European countries are not depended on external countries as in the oil or gas. The indigenous coal fields in Europe and the high technology that the European countries possess let them develop nuclear or renewable energy.

Secondly, these kinds of resources form only a trivial amount of the necessary energy need of European countries. Therefore, other type of resources does not help to explain the energy policy at European level and they are disregarded from the perspective of this study.

2.2.1. Energy Demand in the EU

As a union of 27 member states and with a population of nearly half a billion, the EU produces more than a quarter of the world's total economic activity.[155] Therefore, the huge amount of EU energy consumption is a logical consequence of this fact. For making a precise evaluation of the EU energy demand some information should be figured out. In that sense, areas of consumption, types of energy used and its efficiency as well as statistical data on energy should be taken into consideration. Generally speaking, the total energy need of European Union is around 1700 million tons of oil equivalent (toe). This amount equals to 3.6 toe per capita. This is a comparably modest consumption rate as far as the 7.8 toe/capita and 4.1 toe/capita figures of the US and Japan are respectively considered. When compared to the previous year, the 2005 figures depicted that the overall consumption within the EU remained stable for 2005. [156] As far as the product types are considered, with more than 650 million toe consumption, crude oil and equivalents are the mostly consumed product among all other gross inland energy consumption. Oil is followed by natural gas with an almost 450 million toe consumption rate, coal with around 310 million toe of which hard coal comprises 250 million toe and nuclear resources with 250 million toe consumption rates.

Table 2.1 shows the gross inland consumption rates for EU-25[157]. In some member states, the consumption rates decreased largely like in Lithuania, Finland or Cyprus, whereas some member states consume more than they did in the previous year. Latvia, Hungary and Portugal are among the member states that experienced the largest increases of energy consumption. On the one hand, Germany, France, United Kingdom, Italy and Spain are the members that consume most of the energy within the Union. On the other hand, Belgium, Luxembourg, Finland and Sweden depict the highest per capita consumption rates among all other EU members.

[155] BBC News, 20 June, 2003, http://news.bbc.co.uk/1/hi/world/europe/3007878.stm.
[156] The 2005 figures are relevant for EU 25. The late-comer members do not drastically change the energy need of the Union. For detailed information, see: Eurostat, *Energy Monthly statistics,* Issue number 7/2007.
[157] Malta is excluded since no monthly data available for this member state.

Table 2.1 Gross Inland Consumption			
	mio. toe	***toe/capita***	***% change 2005/2004***
EU-25	1637.2	3.6	0.0
Belgium	52.0	5.0	-2.0
Czech Republic	34.2	3.3	0.4
Denmark	16.9	3.1	-3.9
Germany	324.2	3.9	-1.1
Estonia	4.6	3.4	-1.4
Greece	30.2	2.7	1.1
Spain	139.5	3.2	2.1
France	257.3	4.2	-0.6
Ireland	15.4	3.7	2.6
Italy	181.9	3.1	2.4
Cyprus	2.2	2.9	-4.5
Latvia	3.5	1.5	7.5
Lithuania	7.8	2.3	-6.3
Luxembourg	4.6	10.1	1.3
Hungary	26.3	2.6	5.9
Malta	-	-	-
Netherlands	79.6	4.9	1.2
Austria	29.2	3.6	2.4
Poland	86.2	2.3	0.7
Portugal	24.3	2.3	3.1
Slovenia	6.3	3.1	3.1
Slovakia	28.5	3.4	2.2
Finland	27	5.2	-4.9
Sweden	41.3	4.6	-3.8
United Kingdom	224.1	3.7	-1.3
Source: Eurostat News Release No.126/2006, 21 September 2006.			

For a period of almost 15 years, -excluding the last two years- energy intensity rates for the EU decreased. The lower -thus better- intensity rates are mainly caused by higher growth rate of EU GDP than the growth of final energy consumption rate due to one main factor: Structural changes of the economy. Most of the economies of EU members experienced a shift from industry to services. Moreover, the improvements in the technical efficiency and production processes with the introduction of less-energy consuming industries paved the way to decreases in energy intensity rates. On the other hand, the counter move that increases energy intensity in last two years is mainly due to the enlargement process experienced both in 2004 and 2007. Among the new member states

the energy intensity rate is still around 1.3 times higher than the EU-15. This is also because of the structural differences within the economies of member states.[158]

2.2.2. Energy Supply of the EU

Generally speaking, two kinds of energy resources are available for every country to satisfy its energy needs: Domestic resources and foreign resources. Some countries have higher potentials in terms of energy resources so that they are not in need of external sources. Those countries generally have a negative dependency rate indicating that they may export more resources than they import. Almost all European states, on the other hand, has positive dependency rates which means that they need to import some part of their energy supply from external resources. Only Norway, Denmark, and to a certain extend the Netherlands are exceptions with their ability to export energy resources to the neighbouring countries.

In that sense, energy supply of the EU members will be examined in two steps: First one will cover the capabilities of the EU member states to produce their own energy resources. This part will not only mention the hydro-carbon resources but also nuclear and renewable resources as well. The other type of resources will be taken into consideration because they help a state to act independently at a certain degree and in turn, may affect its foreign policy. Second step will evaluate the energy resources that the EU member states import from foreign countries. These external resources are mostly composed of oil and gas reserves of neighboring regions. This second part will be the main point that links this chapter to the general argument of the thesis.

As it was mentioned above, the actual annual energy requirement of the EU is around 1700 million toe. To balance this demand level, EU imports around 1430 million toe and produces around 780 million toe of energy resources. In aggregate, the imports and local production exceeds the required EU energy needs. Interestingly, this excessive amount constitutes EU members' energy exports. EU exports around 460 million toe of its energy resources. This is important because it shows that some member states prefer to export outside the Union rather than developing the intra-community trade. In addition, the type

[158] For a deeper analysis of energy intensity of the EU member states, see: European Energy Agency, EN21 Final Energy Energy Consumption Intensity.

of product has an impact on trade of energy resources. Most of the EU exports are processed petroleum products, whereas the leading imported energy resource for EU is crude oil and feedstocks. Member states imports resources and re-export to some other countries. Table 2.2 shows a comparative list of production, export and import levels of energy resources of the EU.

Table 2.2 Energy Supply Sources of the EU for 2005

	Primary Production	***Total Imports***	***Total Exports***
Coal	183,890	155,639	26,291
Oil and Petroleum Products	126,807	931,213	347,786
Natural Gas	190,011	313,794	58,978
Nuclear	246,361	-	-
Hyrdroelectricty	29,132	27,448	26,609
Total	776,201	1,428,094	459,664

Source: Eurostat News Release No.126/2006, 21 September 2006.

2.2.2.1. Energy Production in the EU

As similar in any other entity, oil and petroleum products constitute the primary source of energy within the EU. Among others, oil stands out with its excessive import and export figures. As far as production within the EU is considered, however, another source of energy arouses interest. Nuclear energy constitutes almost one-third of the total energy production within the EU. More than half of the EU members have nuclear plants. These are: Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Lithuania, Netherlands, Rumania, Slovakia, Slovenia, Spain, Sweden and United Kingdom. Nuclear energy is an important source since 32 percent of the electricity of the EU, and 15 percent of the whole energy need is produced by nuclear resources.[159] France leads in nuclear energy production within the EU. EDF, the main electricity production and distribution company in France, operates 58 reactors which generates almost 88 percent of the electricity in France.[160] There are some member states like France who prefers nuclear power to generate energy. Finland is the second after France. However some member states do not prefer to use nuclear power. Italy, Austria and Ireland are the most prominent

[159] Annual Report, 2007, *Euratom Supply Agency*, Luxembourg: Publications Office of the European Union, p.4.
[160] For more information, see EDF website: http://www.edf.com/12025i/Home-fr/EDF-Energies/Nuclear-power.html.

examples. Another group of member states, like Germany and Sweden, use nuclear power but officially committed to a gradual phase out of nuclear energy. Finally, in some member states nuclear power reappearing on political agenda. In the Netherlands and the UK, new nuclear power generators and counter debates are continuously debated among political circles.[161] It would also be possible to list Turkey within this group because of the nuclear plant investment plans declared by the Turkish government in recent years.

Along with the nuclear power, EU produces energy by using its own resources of natural gas and coal mines. Each coal and natural gas reserves have a share of approximately one-quarter of the total EU production. Approximately more than one-third of the required natural gas is produced within the EU. Some EU member states have considerable natural gas reserves, despite not being comparable to the gigantic reserves of the Russian Federation, Middle East, Central Asian States or Iran. These member states and their reserves of natural gas are as follows: the Netherlands has 1341 million toe, United Kingdom has 531 million toe, Romania has 270 million toe, Germany has 180 million toe, Italy has 153 million toe, Poland has 108 million toe, and Denmark has 81 million toe of natural gas reserves. With these figures, United Kingdom produces 86 million toe/year, Netherlands produces 62 million toe/year and Romania produces 11 million toe/year.[162] Remembering the fact that the total annual natural gas requirement of the EU member states is around 430 million toe and their respective production is around 200 million toe, it can be easily argued that the EU is urgently in need of new natural gas sources to securitize its energy supply. One of the best alternatives to provide this securitization process is to resort the resources of the Russian Federation and former Soviet Republics of Central Asia. In that sense, Russian Federation has an annual production rate of 530 million toe, Turkmenistan has 50 million toe, Uzbekistan has 50 million toe, Kazakhstan has 20 million toe and Azerbaijan has 5 million toe. Moreover, with a annual production capacity of 250 million toe, the Middle East; and with the capacity of 130 million toe, Africa are other alternative sources of natural gas for the EU.

[161] Van der Zwaan, Bob, 2008, "Prospects for Nuclear Energy in Europe", *International Journal of Global Energy Issues*, Vol.30, No:1, pp. 102-121.
[162] For the consumption and production figures of natural gas, see: BP Statistical Review of World Energy June 2005, p. 22-26.

Coal has the third place as far as the production within the EU is considered. There is an average of 320 million toe demand for coal in EU member states. However, the production of the EU countries is around 200 million toe per year. The gap between the necessary amount and production is imported and will be the subject of the next sub-section of this chapter. Yet, it should be noted here that Poland leads in coal production with an annual production amount of 70 million toe. Poland is followed by Germany (55 million toe) and Czech Republic (23.5 million toe). The other bigger members of the EU, on the other hand, have not has a considerable share in coal production.[163] Even more, Italy and France have almost no production at all. This fact may also help us to comprehend why France has invested so much on nuclear energy production facilities.

As it was mentioned above, oil is the most commonly used source of energy in Europe. The demand for oil within the EU is more than 700 million tons annually. As the most popular source of energy both in Europe and at worldwide, oil has a contrary situation as far as its production within the EU countries is considered. Only three of the EU countries have a considerable oil production sector. United Kingdom, Denmark and Italy produce 95, 20 and 5.5 million tons of oil, respectively. The proven reserves of the member states that worth to mention are as follows: United Kingdom has 600 million tons, Denmark has 200 million tons, Italy and Romania has 100 million tons of proved oil reserves. Despite being a non-EU member, with its 150 million tons of annual production and 1300 million tons of proved oil reserves, Norway has significant oil reserves in Europe. In that sense, Norway has sometimes been considered within the EU in some energy related studies. However, in this case, this study sets Norwegian resources apart from the EU sources.[164] Besides Norway, the most important sources of oil for the EU member states are: Russian Federation and Former Soviet Union States in Eurasia, Middle East, North America, Mexico and the South and Central America, North and West Africa. The imported oil will be examined in the next sub-section of this chapter in detail.

[163] For the consumption and production figures of coal, see: BP Statistical Review of World Energy June 2005, pp. 30-35.
[164] BP Statistical Review of World Energy June 2005, pp. 4-19.

2.2.2.2. Energy Imports of the EU

Imports have a great importance for the satisfaction of EU's energy supply requirement. Since the EU has not sufficient hydro-carbon energy resources, imports of oil, natural gas and coal comprises almost the entire European energy imports. Because, the EU member states are about to meet the necessary requirement, EU's other imports of energy resources are beneath notice. In this sense, contrary to the inland production, oil and its derivatives have the first place as far as imported energy sources of the EU member states are considered. Europe has the second place after the US in oil imports with 12.5 and 12.8 million barrels/day, which corresponds approximately 620 and 635 million million tons per year, respectively. This means that Europe is the one of the two biggest oil consuming markets at the global level. This also means that securing the energy supply is vitally important for European countries since they do not have self-sufficient resources.

Table 2.3. Crude Oil Imports of the Europe (including non-EU Member States)

From	***Million tons***
USA	12.0
Canada	0.7
Mexico	9.1
South and Central America	11.7
Former Soviet Union	264.9
Middle East	159.6
North Africa	95.5
West Africa	27.0
East and Southern Africa	1.3
Asia Pacific	4.3
Unidentified (For unknown military or other purposes)	35.3
Total Imports	621.4

Source: BP Statistical Review of World Energy, June 2005, p. 18.

Table 2.3 depicts regional import figures for the whole Europe, which includes the non-EU states. As the table shows, Former Soviet Union is the main oil supplier for the Europe with a share of more than one-third of the total imports. Middle East is the second largest oil exporter for the Europe with a share of slightly higher than a quarter of total imports. These regions are followed by North and West African countries. Bearing in mind those import figures -particularly from neighboring countries- and that the European countries

require huge amount of energy resources, it can be argued that the EU should assume a more assertive role in world politics as a global actor in order to secure energy independence.[165]

The above Table 2.3 shows, however, the whole European countries. When the EU is taken into consideration, the total imports decrease to 595 million tons of crude oil for 2005. Therefore, despite being not totally a competitor for the US at the moment, the European Union is a considerable importer of crude oil and its derivatives for all other petroleum consuming entities. Table 2.4 depicts 2005 import figures of the EU for crude oil and petroleum products, of which crude oil constitutes almost 80 percent of total imports to the EU member states.

Table 2.4. Oil Imports of the European Union (tons)

Countries		***Crude Oil***	***Petroleum Products***
Egypt		1,845,000	-
Gabon		512,000	-
Mexico		10,616,000	-
Norway		91,470,000	7,732,000
Romania		-	1,725,000
Russian Federation		194,747,000	32,969,000
USA		-	12,136,000
OPEC Members	Algeria	22,576,000	4,817,000
	Iran	34,738,000	-
	Iraq	12,291,000	-
	Kuwait	7,620,000	1,998,000
	Libya	52,208,000	5,234,000
	Nigeria	19,574,000	-
	Saudi Arabia	60,896,000	4,195,000
	United Arab Emirates	201,000	-
	Venezuela	6,877,000	4,818,000
Total		595,468,000	121,404,000

Source: Eurostat News Release No.126/2006, 21 September 2006.

Table 2.4 shows that almost one-sixth of the necessary oil requirement –disregarding the intra-community trade– is supplied by Norway. Together with Norway, the Russian Federation is the greatest supplier of the EU. The share of Russia is more than 31 percent

[165] Whether EU has become more assertive in global political arena or not is a distinct question that goes beyond the scope of this study. For more detailed analysis of EU's global role, see. Charlotte Bretherton and John Vogler, *European Union as a Global Actor*, London: Routledge, 2006.

of the total imports. Considering this figure when complemented particularly with the natural gas imports from Russia, it can be argued that having consistent relations with this country has become an exigency for the EU.[166] On the other hand, OPEC countries have the greatest share in EU oil imports as a group. Among those countries, Saudi Arabia and Libya are the main suppliers. Iran and Algeria have also considerable share in EU's oil supply chain. In that sense, the question of reliability of those sources in the long-run is vitally important for Europe. Various possible risks and threats that those countries may pose on European energy supply security will be discussed in the final chapter of this study, however, it should be noted here that most of the oil suppliers of the EU are not so much reliable because of several reasons. Therefore, the EU significantly needs supply diversification as it was mentioned in various papers prepared by Community agencies and the European Commission.

Natural gas has been one of the most demanded sources of energy in the recent decades. The increasing demand of EU member states for natural gas depicts a similar pattern with the current worldwide demand for this resource as well. In that respect, however, the EU countries do not have sufficient resources to meet the necessary 450 million toe amount of natural gas. Therefore, similar to the oil, EU countries imports most of their natural gas demand mainly from neighboring countries and also from other parts of the world.

First of all, there is a considerable amount of intra-community trade of natural gas among member states. For instance, Germany, France, Italy and Belgium imports 19.2, 8.5, 7.8 and 6.9 million toe of natural gas from the Netherlands, respectively. Germany also exports more than 10 million toe of natural gas to the neighboring EU member states. Besides the intra-EU trade, Norwegian natural gas supplies also constitute an important continental source of energy. Norway exports 84 billion cubic meters of natural gas to the Europe which corresponds around 75.6 million toe. As usual for the demand of other energy resource, Germany, France and the UK are the main demanding member states followed by Italy, Netherlands and Belgium. Again similar to oil, Russian Federation is the main supplier of Europe. The Russian exports to the EU countries almost totaled to 130 billion cubic meters of natural gas, which is equal to 115 million toe. Germany has a share

[166] The EU and all other countries buying energy resources from Russia have become irritated as a result of the natural gas dispute between Russia and Ukraine in 2006.

of 27 percent of natural gas transferred from Russia to Europe, which is around 33 toe of natural gas. Italy has the second place after Germany with an import level of 20.6 toe. These two members, in that sense, are heavily reliant on Russian natural gas. French natural gas import figures from Russia, however, depict a more moderate tendency due to its huge nuclear energy production. With the natural gas import level of more than 6 million toe, Austria is also an important importer of Russian gas. Interestingly, the UK do not have any natural gas deal with Russia. Almost the rest of imported gas from Russian Federation belongs to new member of the EU. Particularly due to the former Soviet ties, these ex-communist countries of Central and Eastern Europe have a considerable share of Russian natural gas resources. Among them, Hungary (7.5 million toe), Czech Republic (6.4 million toe), Poland (6.3 million toe) and Slovakia (5.7 million toe) are the premier importers of the Russian gas. It is also worth to mention here that Turkey would be the third greatest gas importer of Russian gas among the EU members, if the country was accepted to the membership with the import level of 17.7 million toe. Moreover, Turkey may receive more natural gas from neighboring resources, particularly from Russia, so long as its position as a transit country is relevant. [167]

Some of the EU members have also purchased natural gas outside the Eurasian region. As a result of the advantages of proximity and efficiency, Italy, Spain, Portugal and Slovenia imports North African natural gas from their Mediterranean neighbors. Italy is the main importer of the North African gas. This country imports 22 million toe from Algeria and 7 million toe from Libya. Algeria also exports more than 10 million toe of natural gas in aggregate primarily to Spain, Portugal and Slovenia, of which Spain has the primary share of almost 80 percent.

There are some potential regions or countries for becoming a supplier of natural gas to the Europe in order to decrease the natural gas dependency of the EU on particular suppliers. In that respect, the Former Soviet Republics of Central Asia and the Caspian, Iran, Gulf Countries or Egypt seems to be among the most probable suppliers of EU. Moreover, the position of Turkey as a hub between these new sources and the EU may be

[167] For more information about the major worldwide trade movements of natural gas and LNG, see: BP Statistical Review of World Energy, June 2007, pp. 30-31.

an important aspect to evaluate. Turkey's role and related arguments will elaborately be taken into consideration in later chapters.

The EU members also import considerable amount of Liquefied Natural Gas (LNG). African suppliers have taken the lead in providing LNG to the Europe. Algeria exports 21.1 million toe of LNG to the European countries, of which 4.1 million toe is belong to EU candidate Turkey. France is the main buyer for the Algerian gas with 6.6 million toe. After Algeria, Nigeria has the second place in exporting LNG to the EU. This country sells 6.4 million toe of LNG to Spain and 3.8 to France. Portugal and Belgium also purchases LNG from Nigeria. Turkey also imports a limited quantity of Nigerian gas. Finally, Egypt is the third African supplier of LNG to the Europe. The chief clients for the Egyptian LNG are again Spain and France. Egypt exports 7.6 million toe of LNG to European countries in aggregate. Libya has a trivial share of LNG exports with no more than 700 thousand toe to Spain. Besides African countries, two Gulf countries are also listed among the LNG suppliers: Qatar and Oman exports 5.7 million toe of LNG to Spain and Belgium, of which 95 percent goes to Spain. Finally, Trinidad and Tobago sells 3.4 million toe of LNG to Spain, UK and Belgium. In this case, Spain is again the main receiver of the LNG.[168]

As another important hydro-carbon resource, the European countries imports coal from non-European suppliers. Although the EU countries have considerable coal resources, the member states imports significant amount of which is also worth to mention. Around 160 million toe of necessary hard coal is imported from outside the EU. This corresponds 64 percent of the total hard coal consumption. Among the non-EU imports, South Africa and Russia stand out as the main suppliers with respective shares of 25.4 percent and 24.2 percent of total hard coal imports. Australia, Colombia and the US are also among the significant suppliers of hard coal for the EU.

Among the EU members, UK leads with 33.1 million toe of coal imports. Different from oil and gas imports, Germany has the second place with 27.5 million of imports. Italy, Spain, Netherlands and France follows these two big coal importers with respective import levels of 16.4, 15.8, 13.3 and 13 million toe. It should also be mentioned about the hard coal that the total imports of this resource increased by 6.8 percent in the period of

[168] *Ibid*., p. 30.

2005-2006 parallel to the 4.3 percent increase of hard coal consumption within the Union.[169] Lignite – generally known as brown coal – on the other hand is imported in a very trivial amount at the EU level. With the 2004 figures, the import of lignite was 719 thousand toe, which is slightly less than 0.05 percent of the total hard coal imports.[170] From this perspective, the Union members are not vitally dependent on important coal resources not only because they have indigenous coal resources, but also because the share of coal in energy demand is less than oil, natural gas and LNG.

2.3. Energy Policies and Initiatives of the European Union

2.3.1. General

As it is obviously seen in demand and supply figures given above, the EU members have strategically been in an unfavorable position as far as the uneven geological distribution of energy resources are considered. Not only for sustaining its high level economic performance, but also for being an active global player, the EU needs to guarantee supply of energy resources and have to control the stability in certain regions. Otherwise, without obtaining necessary energy, it is almost impossible to be a competitor for existing or emerging powers, i.e. the US and Japan, India and China or Russia.

Generally for this purpose, and particularly after certain events such as the September 11, the NATO operations in Afghanistan and US invasion in Iraq, increasing interest on energy issues within the EU decision making circles have obviously become clear. This revival of energy matters generated its most concrete results with a series of documents. These documents include three important green papers prepared by the Commission and other related documents which are published by Community institutions or other organizations as a result of the debates launched by those green papers.

First of all, the European Commission issued a Green Paper in late 2000. The Green Paper was labeled as 'Towards a European strategy for the security of energy supply'. Being less comprehensive than the 2006 Green Paper, this one also mentioned the problem

[169] Patricia Noizette-Giorgetti, Eurostat Data Infocus, Coal 2005-2006, September 2007, pp. 1-5.
[170] Bosch, J. et al. Panorama of Energy: Energy statistics to support EU policies and solutions, Eurostat Statistical Books, European Commission, 2007, p. 9.

of import dependence in energy resources and sets two main challenges: (1) effects of climate change which raises environmental concerns, and (2) effects of the developing internal energy market on energy demand which may rise political tension. In the Green Paper towards a European strategy for the security of energy supply, the Commission complains about lack of political consensus among the member states and also the limited Community powers in energy policy except for certain areas such as internal market, harmonization, environment and taxation. Therefore, Commission outlined a long term European Energy Strategy. In this initiative, the Commission suggested that the Union should speed up "to ensuring -for the well-being of its citizens and the proper functioning of the economy- the uninterrupted physical availability of energy products on the market, at a price which is affordable for all consumers (private and industrial), while respecting environmental concerns and looking towards sustainable development."[171] European Commission also added that security of supply means diversifying various sources of supply and ensuring a balance among those sources rather than maximizing energy self-sufficiency and minimizing dependence. This initiative shows that the Commission is overtly aware of insufficient sources of member states as well as the inability of alternative sources for hydro-carbons to meet the demand in Europe.

This realistic but modest approach of the Commission basically offers diversification and a balance in energy imports as the best solution for securing energy supply of Europe. With regards to balance in energy imports, Commission asked member states for a 'rebalancing' in supply policy by a clear action in favor of a more moderate demand policy. In that sense, Commission envisaged consumers should be encouraged to have a more realistic and moderate demand by using certain tools, such as taxation measures or using other fiscal instruments.[172] As for the diversification, the Commission recommended providing a strong mechanism to develop strategic stocks as well as searching for new import routes. New routes for oil –as the most important source of energy– were particularly mentioned in this Green Paper. For this purpose, alternative oil pipeline routes from Caspian Sea basin and the southern Mediterranean were emphasized in order to

[171] European Commission, Green Paper: Towards a European strategy for the security of energy supply, 2000, p.2.
[172] *Ibid*., pp.69-71.

diversify the supply of oil.[173] However, the Commission retained from making exact definitions of the routes.

Debates on November 2000 Green Paper revealed an absolute consensus among the main stakeholders, such as Member States and NGOs. This agreement paved the way to a series of Commission proposals on certain activity areas. These are: electricity production from renewable resources, energy saving in buildings, promotion of bio-fuels and a White Paper on transportation policy, which represents almost one-third of the total energy consumption.[174] Despite raising reservation among some of the Member States, the Council welcomed this initiative and supported a new energy strategy for a further integrated energy market[175] which is consistent with objectives of sustainable development and climate change concerns. In that sense, Council asked Commission to provide new proposals about issues of renewable energy and energy efficiency.[176] The Council also mentioned that the debate should focus on controlling demand growth and supply dependence both within the Community level and among supplier countries. Furthermore, the Heads of States and Governments called for the adoption of energy taxation directive in the Barcelona European Council at the end of 2002. To sum up, November 2000 Green Paper opened up a debate which in turn causes the Commission to issue two other green papers concerning the field of energy: First one is related to the control of energy demand. Second one, on the other hand, is more comprehensive yet concentrated on securing energy supply.

As the EU perceives to decrease energy demand as an important way of its supply policy, European Commission worked on a paper suggests controlling energy demand. As a consequence, Green paper on energy efficiency was issued by the Directorate-General (DG) for Energy and Transport in 2005. Based on the idea that the EU could save at least 20 percent of its existing energy consumption with a more moderate energy demand trend, this green paper also referred to the Lisbon agenda, which is currently one of the most

[173] *Ibid*., pp. 71-71.
[174] For the full texts of Directive 2001/77/EC, 2002/91/EC, 2003/30/EC and the Transportation Policy White Paper, see: Security of Energy Supply, Retrieved on: 15 July 2007 from: http://europa.eu/scadplus/leg/en/lvb/l27037.htm.
[175] European Council, 2347th Council meeting – Energy and Industry, Brussels: 14-15 May 2001, pp.10-13.
[176] *Ibid*., pp. 14-18.

important issues of the EU. In this sense, the green paper asserted that saving around 60 billion Euro annually by implementing an effective energy policy could contribute to achieve more competitiveness and employment at the EU level, which represents the main purposes of Lisbon agenda.[177]

The Green Paper on Energy Efficiency initially identified the obstacles against an EU wide energy efficiency policy and then proposed a 'European Initiative.' This initiative envisages actions both at community level and national level. As mentioned in the earlier green paper on energy, the vitality of taxation and other financial instruments were mentioned as well as specific energy measures, such as limiting consumption in buildings and vehicles. Because they are the most energy consuming sectors, industry and transportation is also separately mentioned in the Green Paper on Energy Efficiency in specific chapters. In line with this document, a series of directives were designed by the Commission in order to increase energy saving or forming national action plans. In late 2006, Commission issued a communication known as the 'Action Plan for Energy Efficiency: Realizing the Potential'. The purpose of this document is to "outline a framework of policies and measures with a view to intensify the process of realizing the over 20 percent estimated savings potential in EU annual primary energy consumption by 2020".[178] Rather than concentrating on a specific action, this plan envisages an integrated approach which covers policy and fiscal incentives, more use of technological innovations, more favorable financing conditions and positive shift in consumer behavior. Furthermore, in its meeting on 9 March 2007, European Council backed Commission proposals and agreed on an action plan to put in place a European Energy Policy by 2009. Some important and binding targets were set concerning the issues of renewable energies, greenhouse-gas reduction as well as energy efficiency and saving.[179]

Soon after the Green Paper on Energy Efficiency, another document published by the Commission has dominated the EU agenda much more than any other previous Commission initiative. DG Energy and Transport issued a Green Paper towards a

[177] European Commission, Green Paper on energy efficiency: Doing More with Less, 2005, pp. 4-5.
[178] Action Plan for Energy Efficiency: Realising the Potential, 2006, COM(2006)545 final, Brussels: European Commission., p. 4.
[179] Presidency Conclusions, 7224/1/07 REV1, Brussels: Council of the European Union, 2 May 2007, pp. 10-14.

European strategy for the security of energy supply.[180] This green paper is published on 8 March 2006 and is still the most significant document published by the Commission which provides an outlook for the scope of a potential common energy policy of the Union.

2.3.2. Green Paper towards a European Strategy for the Security of Energy Supply

As it was mentioned earlier, one of the most important deficiencies of the EU is the lack of a common energy policy. Being aware of this fact, the Commission prepared an introduction which highlights the significance of having a common policy with respect to energy matters. Some of the main findings of the Commission include: (1) the huge investment requirement on energy infrastructure, (2) rising import dependency at Union level, (3) relying on few supplier countries, (4) uncontrolled demand increase at global level, which in turn causes oil and gas prices to rise, (5) the threats of greenhouse gas emissions and global warming posed on ecosystems, and finally (6) EU's inability to achieve fully competitive internal energy markets.

After making certain keynote points, Green Paper summarizes the energy needs of EU and its citizens on 'three basic pillars': Sustainability, competitiveness and security. To achieve this end, the Commission perceives any 'approach based solely on 25 individual energy policies' as insufficient. According to the Commission, moreover, the EU –as the world's second largest energy market– has the tools to protect and assert its interests in order to have sustainable, competitive and secure energy. In Commission's perspective, this could be achieved by a new common policy on energy questions. Therefore, the first part of the Green Paper makes an introduction about the current energy debates and identified 6 key areas where action is necessary at Community level. By asking several questions in these key areas, the Commission also questioned whether "there is an agreement on the need to develop a new, common European strategy for energy, and whether sustainability, competitiveness and security should be core principles to underpin the strategy".[181] In this regard, the Commission outlined the 6 key areas to take action as: (1) competitiveness and internal energy market, (2) diversification of the energy mix, (3) solidarity among member states in energy issues, (4) searching for and achieving

[180] Green Paper: A European Strategy for Sustainable, 2006, Competitive and Secure Energy, COM(2006)105 final, Brussels: European Commission.
[181] *Ibid*, pp. 3-4.

sustainable development, (5) leading in innovation and technologies, and finally (6) forming an external policy to speak with a common voice. Before explaining these key areas in detail in the part two of the Green Paper, the Commission stressed the importance of a clear and flexible framework, which means that this policy should be approved and implemented at the highest level as well as open to periodic updating depending on current tendencies in the energy agenda.

2.3.2.1. Competitiveness

The second part of the Green Paper analyzes those six priority areas in detail where action by the Union is almost necessary. The first sub-section of the second part highlighted the requirement for a competition among players rather than dominant national companies in order to achieve considerable prices as well as security of supply. Thus, the Commission perceived protectionism as a threat to energy policy and asked for more improvement at Community level despite the recent activities made for creating a competitive market were appreciated in the Green Paper[182]. In that sense, Commission suggested improvement in five core areas.

The first area that the Commission drew attention is to develop gas and electricity market by forming a single European grid. Common rules and standards are necessary which will help to provide fair and equivalent grid access conditions. Commission recommended forming a European grid code particularly by the collaboration of national network operators. Moreover, Commission also suggested a European energy regulator who would be responsible for cross-border operations.

The second core area requires particular attention is to form an interconnection plan for developing the existing energy network among member states. Reminding the 2002 Barcelona European Council target of minimum 10 percent interconnection level, the Commission demands to develop more interconnection capacity. Progress in energy network is not only important for some countries to access to or provide energy from other member states like in the case of Malta, Ireland or Baltic States, but also to permit a healthy competition like in the case of France and Spain. A better interconnection would

[182] *Ibid*, pp. 5-6.

also help to decrease the need for storing expensive spare capacity. In that sense, Commission recommended to utilize individual measures at member state level, and Trans European Network instruments at Community level. Finally, the Green Paper mentioned the transit role of Switzerland for electricity transfer. [183] In that respect, Commission did not mention Turkey and its transit role. However, it should not be accepted as a failure, since intra-community energy transit routes were the main argument of this second area. Switzerland is the only mentioned non-member country because it is located among various member states and it has a critical role in enlargement of electricity grid of the Union.

Commission mentioned the necessity for investment in generation capacity as the third area that requires particular attention. A 20 years period of substantial investment is envisaged by the Commission to replace the aging electricity generation capacity.

The fourth area is related to a 'level playing field' for a fair and free competition. The positions of national markets at the member states depict differing degrees of competitiveness. The Commission stressed applying further measures in case of a failure in the implementation of the second electricity and gas directive which aims to achieve a standard in all member states.

Finally, the Commission perceived the target of full competitiveness at European industry as one of the five core areas to improve the internal European electricity and gas market. For this purpose, a secure energy at affordable prices in an integrated and competitive market is vitally important. To sum up, competitive and integrated European gas and electricity markets which in turn help to improve growth and jobs at European level is nominated as the first of the six priority areas that the Commission takes attention.

The second priority area that the Commission put forward in the Green Paper is a necessity for the solidarity among member states as far as energy security is considered. A liberal and competitive market that brings predictability and transparency may help a positive incursion of investment to the energy sector, which may in turn increase the security of supply. In that sense, the European Commission offers (1) the formation of a

[183] *Ibid*, pp. 6-7.

European Energy Supply Observatory to monitor the demand and supply at European level, (2) the formation of European security and reliability standards to allow a more perfect flow of information among operators, which may improve network security, and finally (3) the formation of a solidarity mechanism both for protecting infrastructure by common measures and for providing assistance to a member state who faces difficulty or an attack. The Commission recommended revising the EU approach to emergency stocks of oil and gas as well. Since any disruption in the hydro-carbon sources could fail all the system of the EU, the Union must be able to reach even for the short term emergency situations. Moreover, the Commission stressed the global aspect of this issue which requires compatibility with global supply mechanisms. This means a coordinated Community response to the IEA decisions should be properly developed at Community level.[184]

2.3.2.2. Sustainability

A third strategic priority area mentioned by the Commission is to standardize the use of optimum energy mix to tackle competitiveness and security of energy supply. Since the energy mix preferences of a member state may have considerable impacts on the energy security of another member state or the Union as a whole, Commission suggests a clear European framework on the energy mix by using a Strategic EU Energy Review, which would analyze the advantages and disadvantages of different sources of energy. Furthermore, the Commission raised the importance of an agreement among member states on an overall strategic objective for a balanced energy mix both at the Union and member state levels.

The fourth priority area has a larger part within the Green Paper because it evaluates the seriously developing subject of climate change. According to the Commission, despite being an issue of international action, EU has a pioneering position at the fight against climate change and shows a long-term commitment.[185] Green Paper argues that, by concentrating on renewable resources and energy efficiency measures, EU will not only have a leader role in technological innovations but also will be released partly from import

[184] *Ibid*, pp. 8-9.
[185] *Ibid*, p.10.

dependency. The Commission examined this issue under three action areas: (1) Using energy more efficiently, (2) using more of renewable energy sources and (3) using carbon capture and storage techniques more frequently. As for the first one, Green Paper argues an amount of 20 percent of energy used could be saved with reference to the Green Paper on energy efficiency dated 2005. The economic equivalent of this saving is estimated as 60 billion Euros which in turn might be invested in energy saving technologies. In this respect, two kinds of action emerge in the forefront: Engaging in energy saving activities like energy efficiency campaigns in buildings or transportation, and developing energy saving technologies. As for the former, market based instruments and tax policies may be an effective tool, and for the latter, sources from the EU's cohesion policy and investments by commercial banks in energy efficiency projects may be among the potential instruments.[186]

As stated above, the first action area mentioned in the Green Paper is energy efficiency. Another action area –according to the Green Paper– consists of renewable energy sources. After praising the European efforts on depending on renewable resources, the Commission confesses that there are still many steps to take and the Union should rearrange its targets. For this purpose, Green Paper appraised that the Commission will form a Renewable Energy Road Map which will cover key issues. This will include (1) an active program with specific measures, (2) new targets beyond the objective of 2010, (3) new Community directive on heating and cooling, (4) detailed plan for reducing energy dependency and (5) initiatives for making renewable energy sources familiar for the consumers and markets.[187]

Besides energy efficiency and making use of more renewable technologies, Green Paper thirdly suggested carbon capture and storage techniques for the fight against climate change. When compared to the previous action areas, carbon capture requires a long term planning since this area is still in considerable need of research and development activities. However, it is also noted that this technology is particularly important for the countries which uses coal as an important source of energy.[188]

[186] *Ibid*, p.11.
[187] *Ibid*, p. 12.
[188] *Ibid*, pp. 12-13.

Before the final one, the fifth priority area is relevant with previous areas. The Green Paper argued that in order to provide supply security, sustainability and competitiveness, innovative technologies should actively be developed. For this purpose, the Commission suggests initiating a strategic energy technology plan as well as supporting the role of a proposed European Institute of Technology. However, the Commission also has some concerns about the funding of new technologies. Therefore, the Commission contends that policy measures should be implemented in order to provide an open market for new technologies and conditions of market penetration for the existing technologies. Most of these policy measures, according to the Commission, may be comprised of Union level activities which will enforce the member states to implement green certificates, feed-in tariffs[189] and other similar measures for ensuring environmentally friendly energy production.[190]

2.3.2.3. Security

The first five priority areas of the Green Paper that mentioned above were related with the two pillars of the new European energy policy proposed by the Commission. Those are providing sustainability and competitiveness in energy supply system. The final priority area listed in the Green Paper, on the other hand, refers to a third pillar of that proposed European energy policy. This third pillar is known as the security of energy supply. Therefore, the sixth priority of the Green Paper is comparatively more important for the analysis of this study. Therefore, this priority area will be evaluated in more detail.

2.3.2.3.1. Fundamentals of a Common Energy Policy

With respect to providing security of energy, the Green Paper complains about the lack of a coherent energy policy at Union level, which would help EU to play a more effective and assertive international role. In order to manage the energy issues, therefore, the Green Paper suggests determining the aims of a probable Common Energy Policy with certain necessary activities. In this respect, the Commission outlined some key goals and instruments for a common voice considering the energy matters.

[189] Feed-in tariff is the general expression for the price per unit of electricity that a utility or supplier has to pay for renewable electricity from private generators, in which the government regulates the tariff rate.
[190] COM(2006)105 final, pp. 13-14.

First of all, Commission stressed the importance of a certain policy on securing and diversifying energy supplies. By this way, necessary upgrading or construction activities for energy infrastructure may clearly be identified in line with the pre-determined energy mix for the whole Union. New gas or oil pipelines as well as LNG terminals may require considerable time and money for construction. Those types of investment require a certain and long-term policy planning. Therefore, such a policy may help Union to implement regulatory measures, which in turn may foster interest among private sector.

Secondly, partnership with energy producing and transit countries as well as other international actors is vitally important for a coherent EU energy policy. There are bilateral and regional dialogues between the EU member states and suppliers, transit countries and also other major energy consuming countries. However, again according to the Commission, after achieving a single voice in energy supply policies, these relations should be set in accordance with the priorities and principles mentioned in a probable common energy policy. In this respect, relations with major energy suppliers take precedence. Relations with Russia are particularly mentioned in Green Paper and are assumed to be based on a secure and predictable manner after implementing a common external energy policy. This policy would require regulating relations with Russia or any other energy supplier according to the rules at Community level rather than national preferences of individual member states.

Furthermore, forming a pan-European Energy Community covering neighboring countries is presented in Green Paper as an important part of European energy security. According to the Commission, "Creating a common regulatory space around Europe would imply progressively developing common trade, transit and environmental rules, market harmonization and integration"[191] which would in turn provide a predictable and transparent market with secure energy sources for the EU and its periphery. In that respect, Norway, Turkey, Ukraine and Algeria are particularly mentioned in the Green Paper as the strategic partners that further convergence should be achieved considering the energy issues.

[191] *Ibid*, p. 16.

An effective reaction to external crisis situations is another goal mentioned by the Green Paper that a common European voice in Energy issues should target. Commission seeks for a fully coordinated and rapid reaction to emergency situations occurring in the international arena. Therefore a common and straight standing of the EU against energy crises at the international level is the third goal that the Green Paper requires for an effective common energy policy.

As for the fourth goal of a common voice, Green Paper brings forward the requirement for a political will at the Community level. The main target of this political will is to enhance the energy policies and priorities of the EU among the political circles of other regional and international actors. For instance, greater efforts towards widening the geographical scope of the EU Emissions Trading Scheme may be a concrete example of this goal. Moreover, this objective is not limited with near abroad of the EU. At different multilateral fora, i.e. the UN, the G8 or the IEA, the Union may have direct contact with global actors such as the US, China or Japan. Therefore, this fourth goal of a probable European energy policy has a global impact on imposing the energy criteria of the Union on other international actors.

Finally, the Green Paper suggests that an energy policy should target the development of renewable energy sources and other micro-generation projects of many underdeveloped countries. Considering the fact that only 7 percent of Africa's hydro power potential can be used, could it be fair to argue that there is a tough struggle against global warming and climate change? It is not. Therefore, the importance of this target for is overt.

To sum up, the Green Paper, which can be regarded as the Commission's guideline for a common European energy policy puts forward these five key objectives for a proper functioning of any external energy policy at the EU level. On the other hand, setting objectives and defining certain ways is not self sufficient for having a prompt energy policy. The next step is the phase of implementation and implementing a common energy policy requires some instruments.

2.3.2.3.2. Instruments of a Common Energy Policy

One of the most important weaknesses of the Union is that the EU shows deficiency in decision making among member states. Foreign policy is one of the most prominent examples of this deficiency. This situation paves the way to a lack of decisive policy and utilizing effective instruments in those fields. Regarding as a part of the foreign policy, energy security issues are suffered from a lack of decisive policy and effective instruments. Despite it is not fair to talk about an absolute lack of instruments for a European energy policy; it is hard to argue that there are effective means at the hands of Union for implementing a proper policy. Since there is no concrete common European energy policy, the instruments for implementing policies are very limited. Therefore, one of the main reasons for this problem can be attributed to non-existence of Community competences in the area of foreign and security policy as well as energy policies. The Community cannot have sufficient enforcement ability over the decisions of member states. Therefore, the individual interests and policies of the member states decrease the chance of a decisive common energy policy as well as implementation of effective instruments.

Whatever the constraints on imposing foreign policy decisions on member states, EU has a limited number of instruments particularly on energy matters. EU has both carrots and sticks for achieving its energy policy goals mentioned in the Green Paper. More effectively and constantly use of fiscal measures can be used as a tool of inspiring energy saving policies among the people of the member states. Market based instruments, which covers the Community energy tax framework, can be efficiently used for making cost effective investments in order to reduce the energy consumption. With reference to the 2005 Green Paper on Energy Efficiency, low energy consuming technologies may be encouraged by lower levels of tax and products demanding high energy may effectively be discouraged by higher taxation levels for those products.[192] Besides taxes, the EU Emissions Trading Scheme, reducing VAT for energy efficient products and state aids may also be listed as market based instruments. Moreover, framework programs and competitiveness as well as Innovation Programme are also among the most important EU

[192] Doing More with Less, Green Paper on Energy Efficiency, 2005, COM(2005)265 final, Brussels: European Commission, pp.12-13.

funding instruments for encouraging energy efficiency.[193] In summary, the EU funding instruments and market-based instruments are the most prominent tools that the Union can use for its own energy policy initiatives and are in conformity with the EU's soft power approach.

On the other hand, similar to other foreign policy instruments of the Union, some advantageous privileges may be used as energy policy instruments. As far as the energy suppliers and transit countries are considered, it is necessary to integrate them to the European energy network. New treaties with those external energy partners and effective use of Community investment for external strategic energy infrastructure are the most important instruments that the EU can utilize in its energy policies.[194] These instruments, in other words, are a complementary element and are in line with the main aims of European Neighborhood Policy (ENP). The EU provides technical and financial assistance to the neighboring countries as a part of ENP. The common target of the Union and neighbors, in this respect, is to provide a zone of stability, security and well-being. Therefore, energy issues can be a direct beneficiary of ENP. The ENP has also mentioned 'integration of transport and energy networks' as one of the common areas that the EU and ENP partner agreed to improve. In this sense, the positive instruments of energy policy are similar to the foreign policy tools of the Union which falls under the auspices of the first pillar: the EC pillar.

However, different from the foreign policy tools, there is almost no or very little room for the instruments under the second pillar, which is CFSP. The European Union has the chance to act as a body by using declarations and statements, high level visits, diplomatic sanctions, political dialogue, special envoys, peace conferences, arms embargoes and other diplomatic instruments as far as foreign policy issues are considered.[195] However, those instruments can be relevant for energy policy issues as long as those issues cause a security problem for the Union.

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[193]Funding Energy Efficiency in the EU, 2007, *EurActive*, retrieved 10 July 2008, from: http://www.euractiv.com/en/energy/funding-energy-efficiency-eu/article-165378.
[194] COM(2006)105, p.16.
[195] Smith, Karen, 2003, *European Union Foreign Policy in a Changing World*, Oxford: Polity Press, pp. 60-64.

To sum up, the Union has both have some positive and some negative reinforcing policy instruments regarding the energy policy issues. With respect to internal instruments, EU funding mechanisms and market based solutions are the most effective tools. As for the external instruments, the Union has lower level of capabilities since the member states retain the decision making power in their hands. Each member state prefers to use its own instrument in line with its own energy policy, mostly regardless of the priorities and exigencies of other members.

In this respect, the energy policies of smaller member states are naturally incapable of making a severe impact on Union's priorities. However, the preferences and policies of bigger member states have a direct impact on EU energy policy. Therefore, the next sub-section will try to examine the energy policies of some member states that may easily affect the course of EU energy policy making.

In accordance with –the theory shaping the main framework of this study– realism, the energy policies of greater powers are more critical for understanding the developments in energy politics. In that respect the energy policies of four bigger member states will be briefly evaluated in the forthcoming subsection. These are Germany, France, Italy and the UK. Among them, the energy policies of Germany will be most critical one not only because of Germany's current leadership role in the Union but also because of the intensive Russo-German relations in the field of energy. From that point of view, Italy's energy policies are also important because Italy has also developed its energy relations with the Russian Federation in recent years. Italy has also planned to buy natural gas via Greece and Turkey which seems a highly probable project after the opening of Turkish-Greek pipeline in late 2007. As the bigger members who have significant influence on the decisions of the Union and on international politics, the energy policies and perspectives of France and the UK are also worth to mention.

2.4. Energy Policies of Member States

Some of the key information about the energy patterns of the EU members has already given above. However, this part will not only give more detailed data about the energy patterns of four leading members, namely Germany, France, UK and Italy but also will

concentrate on their relations with exporting countries, their policies for providing diversification of energy type or routes and other significant informative characteristics of those member states. Among them, Germany is the most important because of its key leading role at Union level, its huge energy consumption rates and developing German-Russian energy dialogue.

2.4.1. Energy Policies of Germany

As one of the most prominent industrial economies in the world and the leading member state of the EU, Germany's energy trend depicts a very high amount of energy consumption rate at an accelerating pace. In order to meet this growing demand, Germany necessitates external energy resources. However, depending extremely on external resources is politically very risky since most of the economy rests on providing secure energy. Therefore, German policy makers have to balance between having healthy relations with energy supplying countries while searching for alternatives, which ranges from energy efficiency measures to alternative supply routes or investing in renewable energy technologies. Being aware of these, Germany has shifted its energy policy into a more active one when compared to the Cold-War period. Before the details of Germany's growing activities in energy policy, it would be helpful to provide an outlook for Germany's position in energy sectors.

Table 2.5 on the next page shows the energy balance for Germany which provides general information about the consumption levels and the sources of consumption on the basis of energy resources.

2.4.1.1. Energy Demand in Germany

Total primary energy supply (TPES) of Germany is the highest among the European Union member states. Germany's TPES level is almost double of Italy's and greater than French and British TPES levels. In concrete terms, Germany needs around 350 million tons of oil equivalent energy sources in order to satisfy its national requirements. Among these resources oil has the lion's share with almost one third of the total energy demand. Only less than 0.5 percent of the total oil supply is provided by the own resources of Germany. The 99.5 percent of the oil necessary for German economy, on the other hand,

Table 2.5. Energy Balance for Germany*

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	53371	4549	0	14048	43591	1714	3294	16190	0	0	136757
Imports	29779	111977	37589	75626	0	0	0		4168	0	259150
Exports	-697	-560	-27426	-9211	0	0	0	-65	-5628	-4	-43591
International Marine Bunkers	0	0	-2556	0	0	0	0	0	0	0	-2556
Stock Changes	-187	-936	912	-990	0	0	0	0	0	0	-1202
Total Primary Energy Supply	**82267**	**115030**	**8519**	**79473**	**43591**	**1714**	**3294**	**16135**	**-1460**	**-4**	**348559**
Transfers	0	3676	-3037	0	0	0	0	0	0	0	638
Statistical Differences	1745	365	-15	-531	0	0	0	-5	0	0	1559
Electricity Plants	-62715	0	-1316	-4745	-43591	-1714	-2832	-18	45933	0	-71000
CHP Plants	-6855	0	-1204	-13306	0	0	0	-6043	8194	15451	-3762
Heat Plants	-32	0	-186	-406	0	0	-27	-204	0	3862	3007
Gas Works	0	0	-19	17	0	0	0	0	0	0	-2
Petroleum Refineries	0	-125031	123055	0	0	0	0	0	0	0	-1976
Coal Transformation	-4325	23	-1232	-43	0	0	0	0	0	0	-5577
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transformation	0	5938	-6081	0	0	0	0	0	0	0	-143
Own Use	-1000	0	-6696	-405	0	0	0	-75	-4971	0	-13147
Distribution Losses	-388	0	0	-216	0	0	0	0	-2477	-1506	-4587
Total Final Consumption	**8696**	**0**	**111789**	**59838**	**0**	**0**	**434**	**9790**	**45219**	**17804**	**253569**
Industry sector	**7449**	**0**	**3882**	**17255**	**0**	**0**	**0**	**1027**	**19729**	**7633**	**56974**
Transport sector	**0**	**0**	**58443**	**0**	**0**	**0**	**0**	**3467**	**1402**	**0**	**63311**
Other sectors	**979**	**0**	**26714**	**40434**	**0**	**0**	**434**	**5296**	**24089**	**10170**	**108116**
Residential	600	0	18187	28804	0	0	423	5296	12169	0	65479
Commercial and Public Services	355	0	6836	7309	0	0	11	0	11206	0	25717
Agriculture / Forestry	21	0	1628	258	0	0	0	0	714	0	2621
Fishing	0	0	0	0	0	0	0	0	0	0	0
Non-Specified	2	0	64	4063	0	0	0	0	0	10170	14299

* in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=DE.

is imported from other countries. Oil is followed by coal and gas as the main commodities in the energy balance sheet of Germany with the shares of 23.5 percent and 22.5 percent, respectively.

Contrary to the situation in oil, Germany is a coal rich country. With an annual production rate of about 53 million toe, German coal reserves constitutes an important part of country's own energy resources. In other words, almost 65 percent of the necessary coal for the German industry is provided by indigenous resources. Therefore, coal and its derivatives have a primary importance in German energy mix in order to diminish the high level of energy dependency.

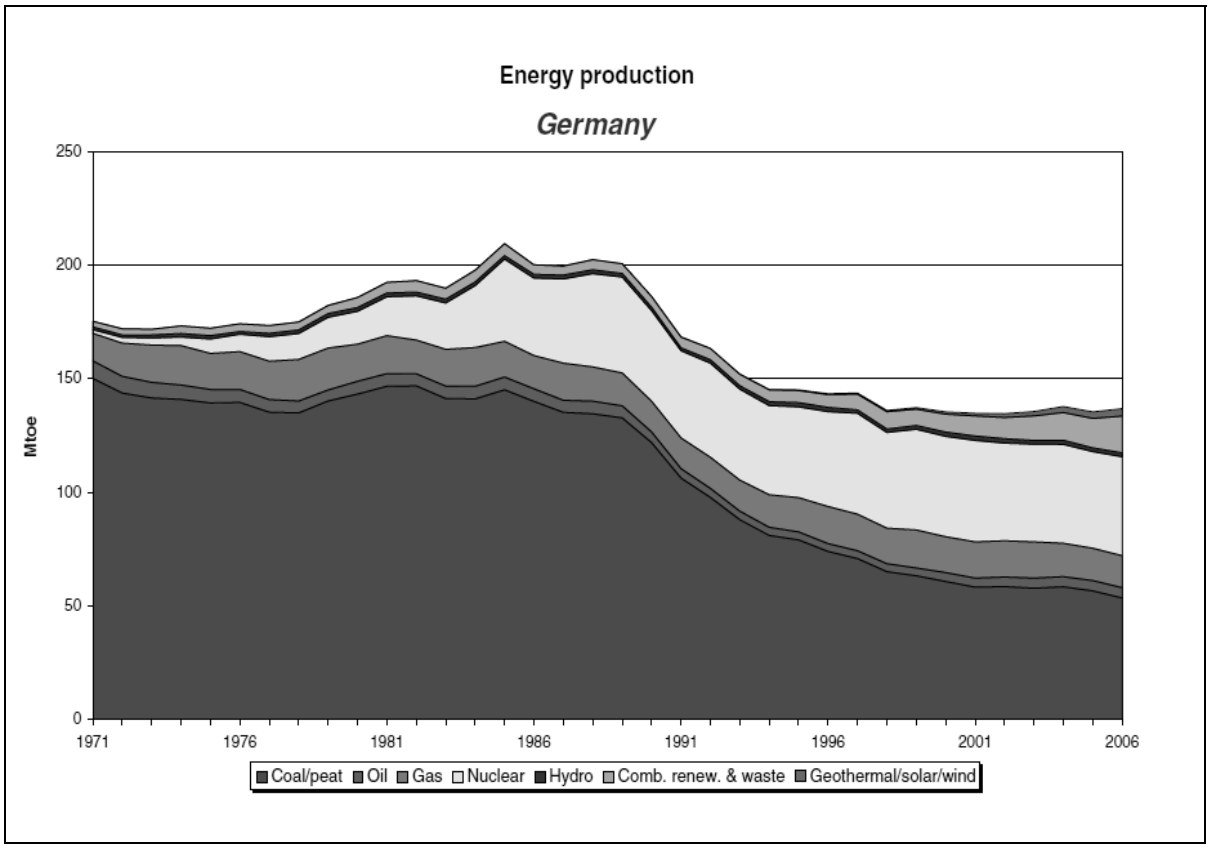
Natural gas is also an important element for Germany. The use of natural gas has been steadily increased in the recent decades as it was in the case of almost all European countries. Annual natural gas necessary for German economy is about 80 million toe. Germany has a production level of 14 million toe of natural gas which is slightly below 20 percent of its total primary gas requirement. Out of this figure, Germany exports some natural gas to its neighboring countries, which means that Germany have –at the moment– ability to access more natural gas than its economy requires. However, the increasing trend in favor of natural gas consumption makes it necessary to find new natural gas sources.

Another crucial energy source for Germany is nuclear power. Germany does not import or export nuclear energy yet produces 43.5 million toe by the existing nuclear power plants. Nuclear energy has a share of 12.5 percent in total primary energy supply of Germany. It seems that German governments are trying to be in conformity with the targets put forward by the European commission for uninstalling the nuclear power plants. However, the need for diversification of energy resources can be a real problem for the governments who sincerely wishes to abolish nuclear energy.

As for the other energy types, Germany has a very limited solar, hydro or geo-thermal resources due to the geographical features of the country. Among them, wind power is the most promising source of energy in Germany with the increasing number of wind tribunes all over the country. Besides the clean energy types, combustible renewable wastes have a share of slightly more than 10 percent among the whole energy produced in Germany.

Figure 2.2 shows the level of Germany's energy production for the last 35 years. The level of coal production has sharply decreased from 150 million toe to 50 million toe. Most of this decline has been compensated by the increased use of nuclear energy. The role of renewable sources has also been growing since 1970s. Furthermore, clean energy sources such as geothermal, solar and wind has also been in an increasing element of German energy production since the early 2000s.

Figure 2.1: The Sources Energy Produced in Germany



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

A sectoral approach to the demand and supply figures of German energy industry is also worth to consider. Almost 85 percent of the coal consumed in industrial sector and only less than 1 percent of the coal is used in residential purposes. The transportation sector, on the other hand, is the primary sector that uses most of the oil and petroleum products. The share of transportation in total final consumption of oil and petroleum products is around 52 percent. Other sectors are responsible almost for a quarter of oil consumption and the residential use of oil is around 16 percent of the total oil consumed in Germany.

Gas consumption, on the other hand, is vitally important for public health because of wide-spread use of natural gas in residential heating. The annual consumption of natural gas in residential sector is close to 30 million toe. Furthermore, it is clear that the industry and other sectors are also heavily dependent on natural gas in German economy. The industry sector uses almost equal amount of natural gas and electrical energy during the production process, which means that German industry is as much dependent on natural gas as electricity provided by the national electric grid. This shows the strategically important role of natural gas not only in residential sector but also in industrial sector in Germany.

The situation is a little bit different when we talk about other energy resources. The nuclear power, for example, is solely used for producing electricity generation at the nuclear plants. Other means of power generation systems i.e. geo-thermal, wind power or combustible renewables, provide energy mainly for the industry sector and other sectors.

This general picture of a sectoral analysis depicts us that as one of the most industrially developed economy at the global scale, German economy is excessively dependent on hydro-carbon resources. As far as coal is considered, the situation is sustainable with regards to the current level of German coal reserves. However, the absence of oil reserves in Germany and insufficient level of gas production increases the risks of energy security. Providing long term energy resources is not only a critical question for the industry but also for the public health and common good because the transportation sector, residential and public services are also heavily dependent on imported hydro-carbon resources.

After examining the details of Germany's energy demand figures, another important question emerges in order to grasp the general German position in terms of energy security: What are the main energy sources of Germany? To answer this question, a short analysis of Germany's energy suppliers would be helpful.

2.4.1.2 Energy Suppliers of Germany

As it was mentioned above, Germany is not a self-sufficient country in terms of energy resources. A simple look to the total energy supply for Germany also helps us to grasp the current situation in Germany's energy supply. Figure 2.2 shows Germany's total energy

supply between 1971 and 2006. It is clear that the decline in German coal resources is mainly substituted by an increase in the use of natural gas. Although the level of oil supplies have not changed at a significant amount, natural gas supplies have almost been tripled in last three decades. The nuclear and other sources of energy production have also depicted an increase in this period yet those supplies are produced by using internal sources of Germany. On the other hand, oil and gas supplies, which constitute more than half of the total primary energy supply, are provided by the external energy providers. The imported energy has increased notably since 1990 by 30 percent.[196] In other words, Germany has become more and more energy dependent in the last two decades.

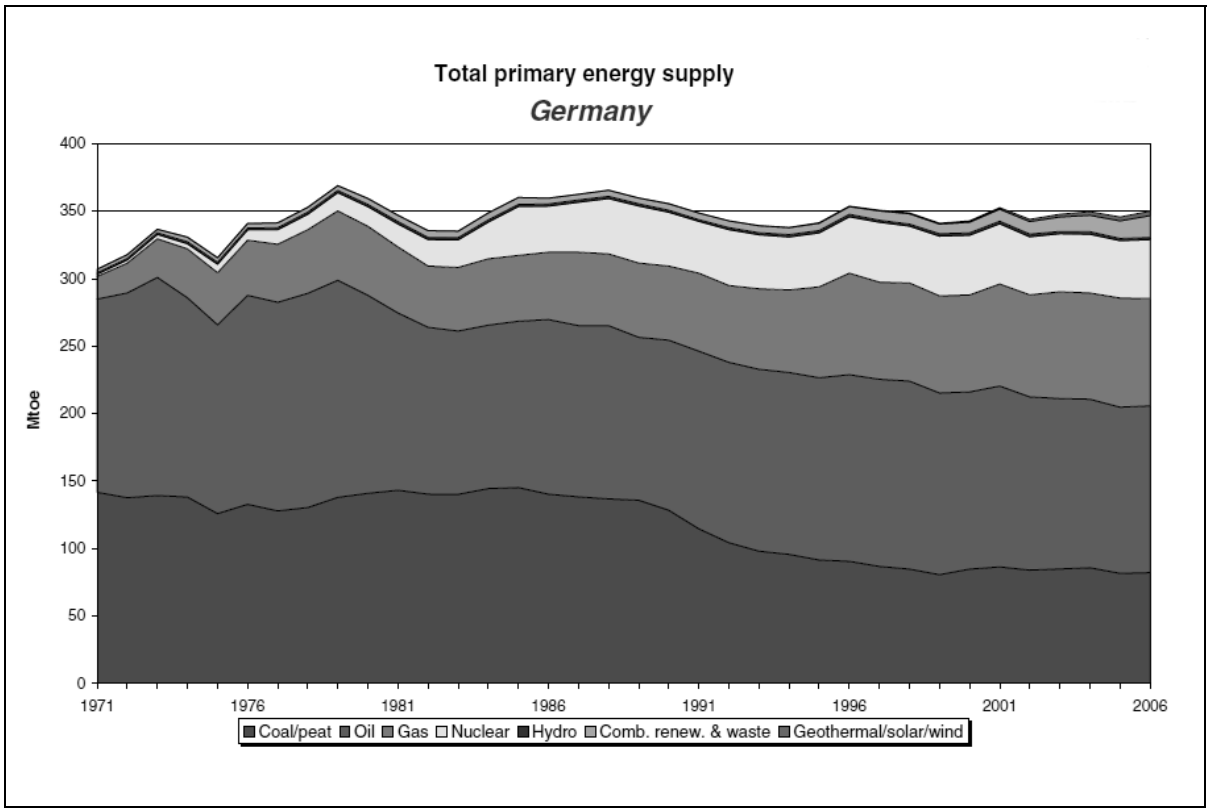
Being dependent on foreign energy resources is not something peculiar to Germany. Most of the industrially developed nations are energy dependent because of their insufficiency in producing necessary energy on their own territory. However, the main question for those energy dependent countries is how to secure their energy supplies. In order to have more flexibility and leverage in foreign policy, being dependent on one country or allied countries may decrease the security of a state. Therefore the European Union and Germany continuously stresses the importance of diversification as a part of energy security policy.[197] The diversification of oil may be comparably easier than diversification of gas because oil can be easily transferred from any part of the world by vessels. However, transfer of gas is not as cheap as oil unless pipeline systems are preferred.

If we look at the German oil and gas imports, we realize that two main neighboring countries have dominated the hydro-carbon trade. These are Norway and Russian Federation. As for the oil market in Germany, Russia holds 40 percent of total oil supply. Norway provides 21 percent of Germany's imported oil. The rest is provided by UK and Libya. Saudi Arabia and Syria also exports oil to the German market.[198] Similar to the oil market, Russia leads in German gas market by a share of 40 percent, and followed by

[196] Germany-Energy Mix Fact Sheet, 2007, Brussels: European Commission, p.2, retrieved 25 March 2008 from http://ec.europa.eu/energy/energy_policy/doc/factsheets/mix/mix_de_en.pdf.
[197] For European Commission's policy of diversification, see: COM(2006)105 final. For Germany's policy of diversification see BMWI, *Report by the German Government on the Oil and Gas Market Strategy.*
[198] Harks, Enno, *Europe's Future of Oil and Gas Supply – North, East or South?* SWP Working Paper FG 8, 2004, p. 4.

Norway which accounts for almost 30 percent of gas imports. The third biggest natural gas supplier of Germany is Netherlands with a share of 22 percent. The rest is provided by United Kingdom, Denmark and other European and Eurasian countries.[199] It is clear that Germany has highly dependent on a few suppliers as far as natural gas is considered.

Figure 2.2: Total Primary Energy Supply for Germany



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

2.4.1.3 German Government's Policies towards Energy Security

The official approach of Germany to the energy politics follows a similar path to the official policy of the European Union. Germany's responsible authority for formulation and implementation of energy policy – Federal Ministry of Economics and Technology (Bundesministerium für Wirtschaft und Technologie / BMWi) – declared the three central aims of German energy policy as: efficiency objective, supply security objective and environmental compatibility objective. [200] Firstly, by the efficiency objective, the Ministry

[199] BP Statistical Review of World Energy, June 2007, p. 30.
[200] BMWi, Energy Policy, see: http://www.bmwi.de/English/Navigation/energy-policy.html

stresses the importance of market economy structures and effective competition for the economically use of energy. According to the BMWi, liberalization of gas and electricity markets at European level is not only vitally important for the benefit of industrial and private consumers, but also will contribute to the international competitiveness of German energy sector.

Secondly, the BMWi concentrates on providing sufficient sources of energy in order to meet the excessive German demand by putting forward the supply security objective. Ministry's supply security objective includes ensuring a diverse mix of energy resources as well as resting on different suppliers from around the world. This policy also covers the efforts to phase out nuclear energy and other activities in order to increase energy saving measures.

The final objective of the BMWi is related to the concerns over environmental protection. Promoting rational use of energy, increasing the use of renewable energies, and other efforts to protect the environment from the negative impacts of energy has been regarded as important elements of this objective. The German Government has launched several initiatives for this purpose.

In line with these principal objectives German policy makers implements an energy policy. The government officials assume that in the following decades most of the energy supplies will be under the control of unstable producer or transit countries.[201] In other words, the supply risks will increase because renewable energy supplies will be far less than satisfying the energy need. According to the German bureaucrats, "Fossil energy sources will account for more than four-fifths of global energy consumption in 2030. Oil will continue to be the most important primary energy source in 2030, accounting for 35 percent of consumption."[202] They also assume that despite having the largest reserve levels, share of coal will decline further in the next two decades. Natural gas, on the other hand, will increase its share in global energy consumption and will become the second important resource after oil by the year 2030.

[201] BMWi Communication and Internet Division, EWI/Prognos - Study: The Trend of Energy Markets up to the Year 2030, Documentation No: 545, Berlin: 2005, p. 13.
[202] *Ibid.,* p. 16

According to the Federal Ministry's report, Europe is advantageous in access to natural gas supplies because of its proximity to the largest portion of world natural gas reserves. The German bureaucrats are also contended that competition among European, American and Asian consumers of natural gas will continue to increase as well as the increasing trend of LNG trade. In other words, a Europe-Asia competition will be on agenda for the Russian, Caspian and the Middle East gas whereas an LNG competition will probably dominate the energy relations between the US and Europe.[203]

The energy bureaucracy in Germany also expects some shifts with regards to the structure of primary energy consumption. The share of natural gas and renewable energies will rise whereas use of coal will significantly drop below the current level. Moreover, the nuclear energy will be out of energy mix in Germany in long-term.

In light of these principle objectives, German Government has defined two types of (demand-side and supply-side) elements in order to limit the risks of import dependency in oil and natural gas.[204] Firstly, since Germany is an importer of oil and gas, the rising oil and gas prices results in a substantial burden on the German economy, which causes a transfer of real income from Germany to the oil and gas exporting countries. Therefore, controlling the energy demand should be an indispensable part of an energy strategy according to the German Government. For this purpose, the Government adopted an Integrated Energy and Climate Programme (IEKP) in August 2007. The IEKP entails an ambitious strategy for achieving higher levels of energy efficiency and expanding the use of renewable sources of energy. This programme contains measures of energy efficiency such as enhancing energy saving in building sector or initiatives to diminish fuel consumption in transportation sector.[205] The government also declared that a competitive energy market is an element of its energy market strategy and defends a more effective unbundling of energy utilities at the EU level.[206] However, the actual dominant positions of

[203] *Ibid.,* p. 18
[204] The Federal Government adopted on 5 November 2008 a report on defining its strategy for providing a secure oil and gas market in German. See: BMWi, *Report by the German Government on the Oil and Gas Market Strategy,* 2008, http: http://www.bmwi.de/English/Redaktion/Pdf/report-oil-gas-market-strategy,property=pdf,bereich=bmwi,sprache=en,rwb=true.pdf
[205] Bundesministerium für Umwelt, Naturschutz und Reactorsicherheit, *The Integrated Energy and Climate Programme of the German Government,* December 2007.
[206] BMWi, 2008, p. 3.

the two giant energy companies in Germany put this statement German Government into question.

Secondly and more crucially, supply-side elements constitute the foreign policy part of the German Government's oil and gas market strategy. The government believes that certain degree of investment should be made for developing energy sources in producer and transit countries. Moreover, the producer countries should be encouraged to invest in Germany as well. This will bring solidarity and security of supply because there will be shared interest between producing and consuming countries. This argument of the German Government can be best seen in its special energy relations with Russia and found a place in its energy market strategy report:

> Russia is Germany's largest energy supplier and Germany is Russia's largest energy market. The high proportion of German imports from Russia has a history going back many decades. With gas delivery contracts lasting up to 2030 and beyond, German firms have a secure foundation for deliveries in this field. In previous years, Russia has always proved to be a reliable supplier. This partnership must be expanded further.[207]

Being very much dependent on Russian gas, Germany needs to have stable relations with Russia. After the 2006 natural gas crisis between Russia and Ukraine, Russia's reliability has been questioned in European policy circles. However, German policy makers believe that the Russian gas has no alternative yet and should be accepted as 'reliable' since it can directly arrive in German market. On the other hand, the Government also stresses the importance of diversification of sources of supply and the transit routes for energy transport. The Report mentions the Nabucco pipeline project as an important contribution to the trans-European energy network. Although the Nabucco project ends in the territory of Austria and do not enter into the borders of Germany, the Federal Government perceive it as an important contribution to diversification problem. As well as relations with suppliers and transit countries, German Government indicated the importance of storage capacities in order to cope with crisis situations. Germany has the forth largest natural gas storage capacity after U.S., Russia and Ukraine and points out that the other member states of the EU should concentrate on storage capacity investments for not being frustrated in cases of gas disruptions. The German Government also indicated

[207] *Ibid,* p.4.

that "mutual solidarity will only become possible on the basis of efforts undertaken by the member states".[208] This can be read as a confession by the German Government for the difficulty of forming a common policy on energy issues at the EU level.

To sum up, the Federal Government of Germany has declared some ambitious objectives for the security of energy supply. The demand side strategies may have considerable effect in the course of time depending on the technological innovations in energy saving and renewable energy production systems. However, the control of supply side does not have any regular determinant. The policies of supplier or transit countries are generally out of Germany's control. In that sense, developing and sustaining friendly relations with those countries as well as searching for new suppliers are the central tenets that an energy importing country should follow. Germany declared the importance of these priorities in its report. However, sometimes the priorities of Germany in the field of energy may contradict with the priorities of other member states or Union in general. In that case, divergences emerge between declared and de facto policies of the member states. These divergences and preferences will be analyzed in the final chapters in more detail.

2.4.2. Energy Policy of France

France is one of the leading member states of the EU and it has a considerable power in decision making process of the EU. Therefore its decision in energy politics is extremely important. However, unlike Germany, the French energy mix depicts a different scheme in which nuclear power constitutes the highest portion of total primary energy supply. France is also highly dependent on external sources as far as hydro-carbon resources are considered. Yet, the capability of France in nuclear power generation provides her a considerable leverage in its foreign policy and a different path from other member states in its approach to energy policy formation process. France exhibits an energy import dependency with the average EU dependency levels.[209]

Before the details of French preferences in energy policy, it would be helpful to provide an outlook for the position of France in energy sectors. Table 2.6 on the next page shows

[208] *Ibid.,* p. 5.
[209] France-Energy Mix Fact Sheet, 2007, Brussels: European Commission, p.1, retrieved 30 March 2008 from http://ec.europa.eu/energy/energy_policy/doc/factsheets/mix/mix_de_en.pdf.

the energy balance for France which provides some general information about the consumption levels and the sources of consumption on the basis of energy resources.

2.4.2.1. Energy Demand in France

Total primary energy supply of France is considerably above the EU level. After Germany, France is the second largest energy consuming member state among EU with 272 million tons of oil equivalent energy supply. This amount corresponds about 2,5 percent of total world energy supplies. As mentioned above, the lion's share in France's energy mix belongs to nuclear power. Slightly more than 40 percent of the total energy supply is provided by the sources of nuclear power. As it is indicated in Figure 2.3, France is not only the first among European countries in nuclear power, but also has the second largest nuclear capabilities at global scale after the United States.

Despite having less than 0,01 percent of the world fossil fuel reserves on its own territory, the figures of France depict a large amount of oil and gas consumption rates. As it's shown in Table 2.6, almost one third of its primary energy supply comes from crude oil and petroleum products which is equal to just above 90 million toe. Without having any oil reserves, this figure means that France is highly dependent on external countries in satisfying the necessary demand of its economy.

Although France is less dependent on natural gas when compared to Germany, the share of gas in its energy mix is around 15 percent, which is equal to 40 million toe of natural gas. Similar to oil, own production of natural gas is very trivial in France and only 1/40 of the necessary natural gas is produced in France.

The share of French coal in the country's energy mix is not as high as the level in Germany. French economy consumes 14 million toe of coal, which equals to 0,04 percent. Moreover, almost all the necessary coal is imported from external sources.

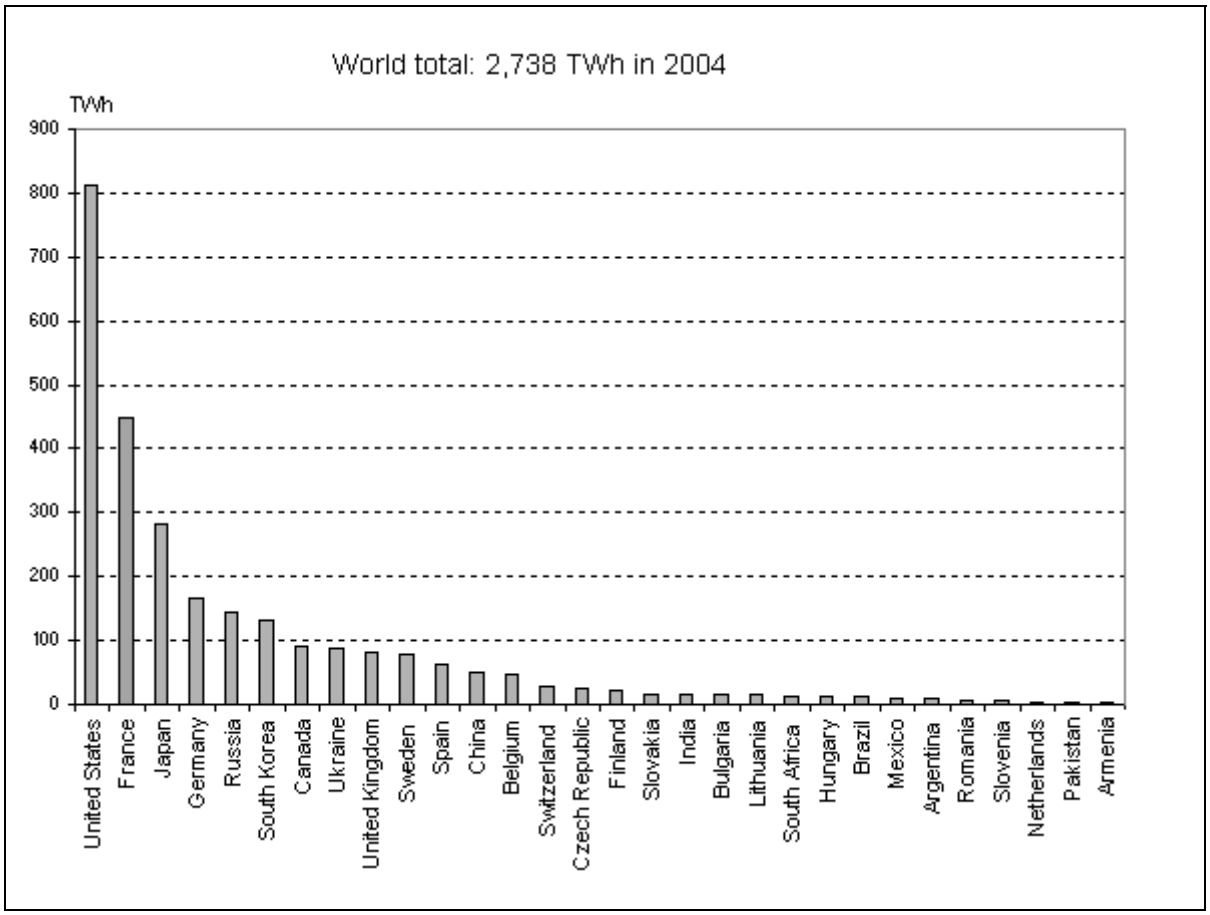
Table 2.6. Energy Balance for France

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	281	1100	0	1058	117353	4801	388	12070	0	0	137021
Imports	14392	82006	38277	40137	0	0	0	0	733	0	175557
Exports	-558	-20	-27898	-679	0	0	0	0	-6180	0	-35334
International Marine Bunkers	0	0	-2824	0	0	0	0	0	0	0	-2824
Stock Changes	-919	168	-100	-903	0	0	0	0	0	0	-1753
Total Primary Energy Supply	**13197**	**83254**	**7455**	**39613**	**117323**	**4801**	**388**	**12082**	**-5447**	**0**	**272666**
Transfers	0	2867	-2668	0	0	0	0	0	0	0	199
Statistical Differences	230	-161	106	62	0	0	0	48	0	0	285
Electricity Plants	-5743	0	-1651	-503	-117323	-4801	-231	-672	46913	0	-84011
CHP Plants	-492	0	-946	-5026	0	0	0	-830	2038	3814	-1442
Heat Plants	0	0	0	0	0	0	0	-270	0	136	-135
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-87433	88335	0	0	0	0	0	0	0	902
Coal Transform.	-2778	0	-30	0	0	0	0	0	0	0	-2808
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transformation	0	1474	-1533	0	0	0	0	0	0	0	-59
Own Use	-462	0	-3892	-173	0	0	0	0	-3795	0	-8322
Distribution Losses	0	0	0	-586	0	0	0	0	-2736	0	-3322
Total Final Consumption	**3952**	**0**	**85175**	**33387**	**0**	**0**	**157**	**10358**	**36973**	**3950**	**173952**
Industry sector	**3597**	**0**	**6295**	**9265**	**0**	**0**	**0**	**1568**	**11945**	**0**	**32670**
Transport sector	**0**	**0**	**49013**	**62**	**0**	**0**	**0**	**713**	**1061**	**0**	**50849**
Other sectors	**356**	**0**	**16907**	**22435**	**0**	**0**	**157**	**8076**	**23967**	**3950**	**75848**
Residential	356	0	9321	14610	0	0	115	7614	12639	0	44655
Commercial and Public Services	0	0	4650	4942	0	0	32	423	10887	0	20934
Agri. / Forestry	0	0	2229	266	0	0	9	40	283	0	2827
Fishing	0	0	360	0	0	0	0	0	10	0	370
Non-Specified	0	0	346	2618	0	0	0	0	149	3950	7062

***** in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=DE.

Other sources of energy, such as hydro, geo-thermal or combustible renewable and wastes have also a trivial share in total primary energy requirement of France. The total of these sources is below 0,1 percent of total energy demand of French economy. Figure 2.4 illustrates the extreme dominance of nuclear energy in French domestic energy production. After the oil crisis experienced in 1970s, French governments have invested huge amounts in nuclear energy facilities in order to prevent the losses caused by energy dependency.

Figure 2.3. Nuclear Power Generation by Country

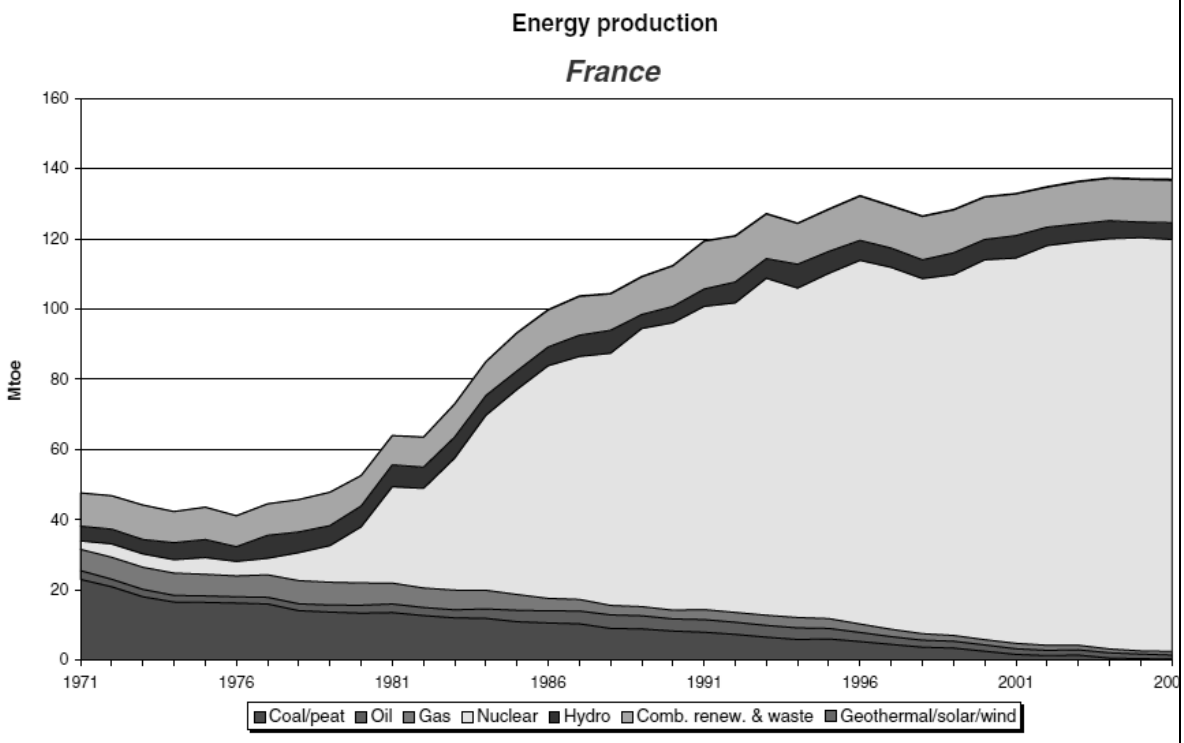


Source: Ministere de l'Ecologie de l'Energie du Developpement durable et de la Mer (Ministry of Ecology, Energy and Sustainable Development), http://www.developpement-durable.gouv.fr/energie/anglais/politique-energetique.htm#1

Despite the decisions of the EU, the contribution of nuclear energy to the French energy sector has been steadily increasing. On the other hand, the share of renewable sources has steadily been growing since the early 1990s. However, the main determinant in French energy policy is extremely dominated by the nuclear power.

A sectoral analysis of the demand and supply figures of French energy industry may also contribute to understanding the French energy policy making process. With reference to the Table 2.6., transportation sector consumes more than half of the total oil consumption due to the growth in road transport of passengers and goods in the last two decades.[210]

Figure 2.4: Total Primary Energy Supply for France



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

Natural gas, on the other hand, is mostly used by the non-industrial sectors and in residential purposes. The electricity produced by nuclear plants is intensively used by industry sector and other sectors. A quarter of the total electricity produced by nuclear energy is used in residential purposes. In other words, transport sector, services and other sectors as well as residential use of energy constitutes almost two-third of the energy

[210] Ministere de l'Ecologie de l'Energie du Developpement durable et de la Mer, 2008, *France's Energy Situation,* retrieved 30 March 2008 from http://www.developpement-durable.gouv.fr/energie/anglais/politique-energetique.htm#1

requirement in France. This sectoral conclusion gives an important hint for this study because the role of natural gas in France is very restricted when compared to Germany and other member states. Particularly a sudden fall in natural gas transfer neither hampers the functioning of industry nor affects the daily life of French citizens at a great extend.

After having a look at French energy demand structure, we realized that a considerable part is supplied by external resources. Therefore, it is important to evaluate the origin of destinations of the imported fossil fuel routes. How reliable the suppliers are an important determinant for estimating the French position in French contribution to the energy policy implementation at EU level.

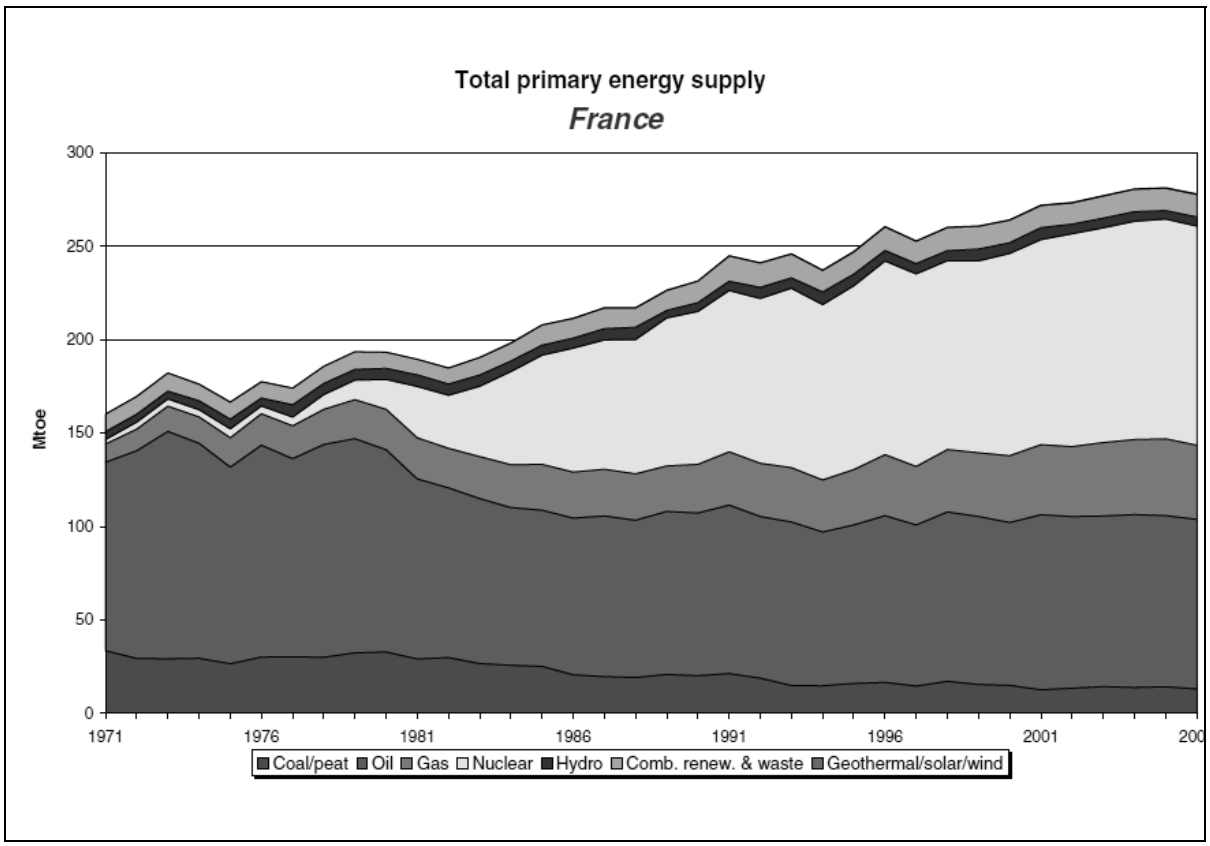
2.4.2.2 Energy Suppliers of France

As it was clearly stated above, France has developed a huge nuclear energy capability because of its insufficient indigenous hydro-carbon resources. However, the nuclear energy constitutes less than half of France's energy requirement. The rest of the energy need is imported from different destinations. Figure 2.5 shows the total energy supply in France between the years 1971 and 2006. Within this period, the use of coal is steadily decreasing similar to the case in Germany. However, different from Germany, France does not have as much coal reserves as Germany. This means that this decline in coal reserves may decrease further in the following years.

The use of oil, on the other hand, has a very steady pattern for the last three decades. There were some sharp reductions during the global oil crises, yet returned back to its normal level in a short time. However, natural gas has a different graph. The use of natural gas in France's energy mix was very limited in early 1970s. After the oil crises of 1070s, the use of gas increased. Moreover, the decline in the use of coal also contributed to this trend and gas consumption has been growing since the mid-1980s. In more concrete terms, gas imports have increased by 55 percent over the period 1990-2004, which reflects an increased demand in France.[211]

[211] *Ibid,* p.2

Figure 2.5: Total Primary Energy Supply for France



Source: OECD/IEA, 2008, www.iea.org/statistics/index.htm.

Different from Germany, France relies on different countries as suppliers of hydro-carbon resources. Together with this, the diversification of energy types of France is also different from Germany. France does not only import oil and natural gas but also LNG at a certain level. As for the import of natural gas, France is heavily dependent on Norwegian natural gas with a share of almost 40 percent, which is followed by imports from Russian Federation and the Netherlands. Russia provides one-forth of the total natural gas provided by pipelines. Similarly the Netherlands has a share of a quarter in France's natural gas market. The outlook of French natural gas shows that the French government has achieved a better diversification of suppliers when compared to Germany. In addition, they also have the advantage of resource diversification by using LNG, which equals to more than one-third of the natural gas imported by the pipelines. The greater share in LNG imports belongs to Algeria. Algerian share is slightly above the half of the total LNG imports of

France. Nigeria provides one-third of the imported LNG. Egypt has also had a 20 percent share in French LNG market.[212]

As the world's fourth largest oil importer, France has several oil suppliers. Most of the oil imports of France come from Saudi Arabia and Norway. United Kingdom, Iran, Iraq, Nigeria and Russian Federation are other prominent suppliers for France. Therefore, it can be said that France has already achieved a considerable level of diversification of suppliers as far as oil is considered.

Despite all of the efforts to diminish energy dependency, i.e. increasing the share of nuclear and renewable energy sources, French government has to develop stable relations with energy providing states. The current level of imports from certain countries may satisfy the French energy need, yet there is no guarantee that these resources will be secure in the future. The declining levels of Norwegian and other European resources as well as EU policies towards reduction in the use of nuclear power may put considerable pressure on French government.

2.4.2.3 French Government's Policies towards Energy Security

The history of French energy policy has been characterized by a state-controlled structure. According to Sophie Meritet, this state oriented vision of French energy structure has to change with globalization of the energy markets, the construction of the EU, the multiplication of uncertainties and also financial constraints facing states for energy investment. Like all the other Member States, France has its own energy policy based on its national interest. French Government still has a dominant position in energy policy making but has to take into consideration the European point of view as well. [213]

At the rhetoric basis, Energy Act of 2005 defines the latest French approach to the energy policy. According to this act, four priority axes is emphasized: (1) National energy independence and the security of supply, (2) protection of human health and the

[212] European Gas Market, 2008, *The Oil Drum: Europe,* 2008, retrieved 30March 2008 from http://europe. theoildrum.com/node/4361.
[213] Meritet, Sophie, 2007, "French Perspectives in the emerging European Union energy policy"*, The 30rd I.A.E.E. Conference- International Association for Energy Economics,* Wellington*,* retrieved 30March 2008 from http://www.meritet.net/ Articles/Article%20Wellington.pdf, p. 3-4.

environment, (3) competitive energy prices at low cost for households and industries, and finally (4) social and territorial cohesion by ensuring all to access energy.

By the first priority area, the French government aims to diminish the negative impact of energy shortages on French economy and the daily lives of its citizens. The second priority area concentrates on the negative impact of energy production process on climate change issues and the control of pollutants and radioactive wastes. These two objectives are generally accepted by most of the member states. The latter two objectives are more peculiar to the French energy preferences. One of them, the third one, is about stabilizing the energy prices which may contribute to the well-functioning of French economy. Particularly in sectors where high energy consumption is necessary, the attractiveness of France in a strong international competition atmosphere can only be achieved by favorable energy prices. The final objective, which may also be regarded as specific to France, is about the access of every –even the most deprived– citizen to the energy sources with affordable prices.

In order to achieve these four main objectives the French government defined an action plan consists of four steps. The first step is to control energy demand by implementing incentives such as tax reduction. Second step is to diversify sources of energy supply. This step requires using high technology infrastructure for energy production as well as resorting renewable sources more in the production process. However, the most interesting point in this step is that it leaves an open door for the nuclear energy option. The third step is about developing transportation and storage capabilities for increasing safety in energy supply. In particularly, building new infrastructure for electricity and natural gas grids as well as storage facilities are the main activity areas of this step. Finally, investing on research and development projects is the forth step which has long-term consequences. Supporting the innovations in bio-energies, energy efficient vehicles and buildings, and 4th generation nuclear energy are all part of this step.

The Energy Act issued in 2005 is generally compatible with most of the official documents of other member states or the European Commission's Green Paper. However, there are some certain questions remained within this act. This may cause a contradiction in itself while the French Government implements this act. For example, one of the main

aims of the act mentions the objective of developing policies for ecological and health safety. On the other hand, the act favors the economical way of producing energy for the reasons of employment and competition in international trade. Therefore, an important question emerges here: Which objective will prevail when these two objectives contradict with each other? Will the French Government be ready to decide in favor of environmental concerns when the economic benefits of the French industry are at stake? The answers of these questions have impact on the whole European energy policy process. Some of the unwritten declarations of the government officials, which will be discussed in later chapters, show that France is not very much willing to leave the nuclear energy leverage in order to comply with the EU energy norms.

2.4.3. Energy Policies of Italy

As one of the leading EU member states and potential great power in European politics, Italy has a huge industrial sector relying mostly on imported energy. Italy's population is over 60 million people, which also requires energy for the purposes of transportation, heating and other social facilities. However, similar to the case in Germany and France, Italy's domestic energy resources are very limited, which leads Italy to rely heavily on energy imports in order to meet its high consumption rates. Therefore, energy security and diversification of energy sources are the key points of Italy's energy strategy. When compared to other bigger members of the EU, oil and natural gas constitute most of Italy's energy requirement. The share of these hydro-carbon resources in total primary energy supply of Italy is almost 90 percent. Before examining the details of Italy's energy policy for security of supply, it would be helpful to evaluate the current structure of energy in Italy. Table 2.7 on the next page summarizes energy balance for Italy. It clearly provides general information about energy consumption in Italy as well as the distribution of resources. The table also clarifies which type of energy is used in specific sectors.

2.4.3.1. Energy Demand in Italy

Italy is in the fourth place after German, France and UK as far as the level of energy consumption in the EU is considered. Italian economy requires about 185 million tons of oil equivalent energy sources according to the data provided by International Energy

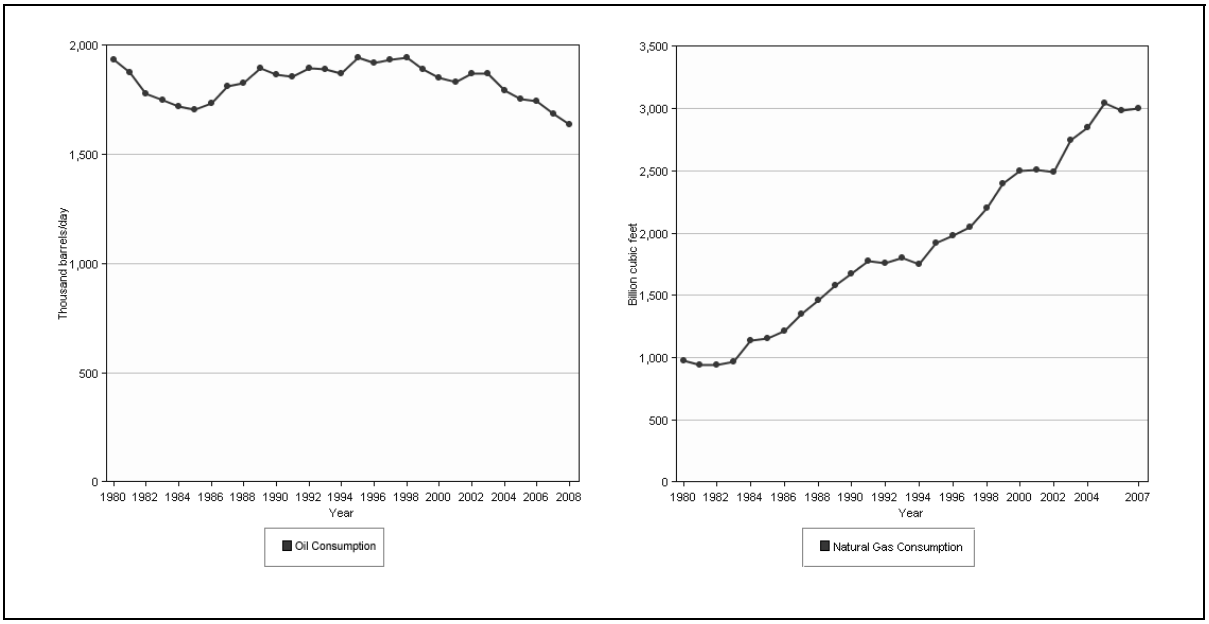
Table 2.7. Energy Balance for Italy

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	13	6103	0	8989	0	3181	5258	3883	0	0	27427
Imports	16768	93471	13386	63372	0	0	0		4007	0	191952
Exports	-152	-1706	-26457	-302	0	0	0	-2	-139	0	-28758
International Marine Bunkers	0	0	-3472	0	0	0	0	0	0	0	-3472
Stock Changes	45	307	-445	-2887	0	0	0	0	0	0	-2980
Total Primary Energy Supply	**16673**	**98176**	**-16988**	**69172**	**0**	**3181**	**5258**	**4828**	**3869**	**0**	**184169**
Transfers	0	0	70	0	0	0	0	0	0	0	70
Statistical Differences	0	108	-189	0	0	0	0	0	0	0	-81
Electricity Plants	-10453	0	-6442	-14045	0	-3181	-5010	-1319	17720	0	-22730
CHP Plants	-1044	0	-2821	-13447	0	0	0	-1174	8741	4989	-4755
Heat Plants	0	0	0	0	0	0	0	0	0	0	0
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-100364	100623	0	0	0	0	0	0	0	259
Coal Transform.	-2315	0	0	0	0	0	0	0	0	0	-2315
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transform.	0	2081	-2184	0	0	0	0	-82	0	0	-185
Own Use	-68	0	-5226	-328	0	0	0	0	-2062	0	-7683
Distribution Losses	0	0	0	-465	0	0	0	0	-1714	0	-2179
Total Final Consumption	**2794**	**0**	**66844**	**40888**	**0**	**0**	**248**	**2253**	**26555**	**4989**	**144569**
Industry sector	**2619**	**0**	**6648**	**14733**	**0**	**0**	**0**	**276**	**12673**	**0**	**36948**
Transport sector	**0**	**0**	**42785**	**413**	**0**	**0**	**0**	**161**	**879**	**0**	**44238**
Other sectors	**7**	**0**	**8526**	**24796**	**0**	**0**	**248**	**1817**	**13003**	**4989**	**53385**
Residential	7	0	5342	17042	0	0	35	1621	5817	0	29864
Commercial and Public Services	0	0	463	7605	0	0	0	0	6713	0	14781
Agriculture / Forestry	0	0	2341	149	0	0	0	196	467	0	3152
Fishing	0	0	243	0	0	0	0	0	6	0	250
Non-Specified	0	0	137	0	0	0	213	0	0	4989	5338

***** in thousand tons of oil equivalent (ktoe) on a net calorific value basis.
Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=IT.

Agency. Among all other sources of energy, oil is the primary source of energy demanded in Italian energy market. Crude oil constitutes more than 44 percent of the total energy demand in Italy. Although the demand for oil has declined in the recent years due to the global economic crises and high oil prices, oil seems to be the main energy supply for Italy for the foreseeable future. As mentioned above, Italy is not a rich country in terms of energy resources. The domestic oilproduction is only 5 percent of total demand for all crude oil and petroleum products of the country. Demand for oil is followed by natural gas with a share of 37.5 percent. The use of natural gas in Italy is continuously increasing in the recent years. The domestic production of natural gas is more promising when compared to oil. Approximately 12.5 percent of the gas is produced domestically within Italian gas fields. Most of the gas production in Italy comes from offshore fields in Adriatic and Ionian Seas as well as off the coast of Sicily. Italian energy company ENI search for new fields and tries to improve domestic production in order to compensate the increase in demand for natural gas.

Figure 2.6. Comparison of Demand for Oil and Gas in Italian Energy Markets



Source: Energy Information Administration, http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=IT.

Italian energy market is very different from other bigger member states of the EU. Oil and gas demand has dominated all energy market. Total share of oil and gas is almost 82 percent which means a high degree of rigid energy market in terms of fuel type. From this

point of view, Italian energy market is urgently in need of diversification based on fuel type. As for other types of energy, there is a very low demand for coal, geothermal, hydro and renewable resources. Among them, coal has a share of 8.5 percent and the others have a total share of 6-7 percent of the total energy demand. Interestingly, Italy has no nuclear energy plant and the share of nuclear power in its energy mix is zero. France has almost totally equipped with nuclear power. In addition, Germany and UK has a considerable share of nuclear energy in their energy mix. Italy, as a potential rival for those countries in terms of distribution of power, throws away the nuclear opportunity.

A sectoral approach to the demand figures of Italian energy market is also worth to evaluate Italian energy policies. Most of the total oil and petroleum products are used in transportation sector. Oil products are also used in industry and other sectors. The natural gas, on the other hand, is mostly used by industrial and other sectors. Residential use of natural gas is also increasing in Italy. Other forms of energy resources are generally used by industrial sectors as well as residents in the form of electricity.

In light of the demand situation, it is clear that Italian policy makers should not only diversify the energy suppliers but also fuel types. Otherwise the country will be extremely open to external influence of both suppliers and its potential great power rivals. An analysis of suppliers would help to comment more on the fragility of Italian energy market.

2.4.3.2. Energy Suppliers of Italy

As mentioned in this part before, Italy displays by far the highest supply security problem across G7 members due to the limited energy mix structure of the country and its resource poverty.[214] Italy depends so heavily on oil and natural gas imports, with shares of 93 and 88 percent respectively. Among the oil suppliers of Italy, Libya is the leading energy partner. This country provides almost one third of oil necessary to Italian economy.[215] In line with the increasing trade relations between Russia and Italy, oil trade is also worth to consider. As the major gas supplier, Russia also provides nearly one-fifth of

[214] Frondel, Manuel et.al., 2009, "Measuring Energy Supply Risks: A G7 Ranking, "Ruhr Economic Papers 0104, Rheinisch-Westfälisches Institut für Wirtschaftsforschung, Ruhr-Universität Bochum, Universität Dortmund, retrieved 21 July 2009 from http://ideas.repec.org/p/rwi/repape/0104.html#provider.
[215] Willams, Stephen, 2009, “Gaddafi Conquers Rome”, 2009, *African Business,* No: 355, pp. 62-63.

the oil supply of Italy.[216] Italy has also a tight oil trade with Iran. Crude oil imports constitute 85 percent of trade with the current trade level of Iran, which is equal to 8 billion USD.[217] Moreover, Italy has developed warm ties with Iran compared with other EU states and several Italian companies are operating actively in Iran.[218] Despite the American threat on companies developing relations with Iran, Italian energy giant ENI has continuously invests in Iranian oil and gas fields since early 2000s.[219] Saudi Arabia is another main supplier of Italy with a share around 10 percent of oil demand in Italy. Syria, Iraq and Norway also provides oil supplies to Italy with amounts between 5-7 percent of demand changing due to current political and economic developments.[220] As a concluding remark for oil suppliers, it may be argued that Italy has also problem in diversification of suppliers. Relying heavily on Libya and Russia may bring deficiency to Italian foreign policy decisions in relations with these countries.

As for the natural gas, the outlook of suppliers depicts a similar picture to the oil suppliers. Figure 2.7 shows that Italian gas market is dominated by Algerian and Russian gas with approximately 25 and 22 bcm annual supply respectively. Netherlands and Norway follow these two suppliers with less than 10 bcm supply of gas annually. Most of the downstream market in Italy is controlled by ENI. This company's national network is connected to three main international large-sized gas pipelines. TENP pipeline is 924 km long and carries Norwegian gas to Italy. TAG is a 1018 km long pipeline connects Italian national hub to Russian resources. TTPC and TMPC (742 and 575 km long) are the pipelines that connect Algerian gas resources to the Italian mainland.[221] These are the

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[216] Giusti, Serena, 2008, "The Ambiguous Effects of the Rome-Moscow Bipartisan Axis on the EU Policy Towards Russia", *Italian Foreign Policy*, No: 9, retrieved 25 July 2009 from http://www.foreignpolicy.it/adon/files/giusti.rtf.

[217] Italy a reliable trade partner, 2009, *Iran – Italy Chamber of Commerce, Industries and Mines,* retrieved 22 July 2009, from: http://www.iiccim.com/eng/news/?tp=2&id=596.

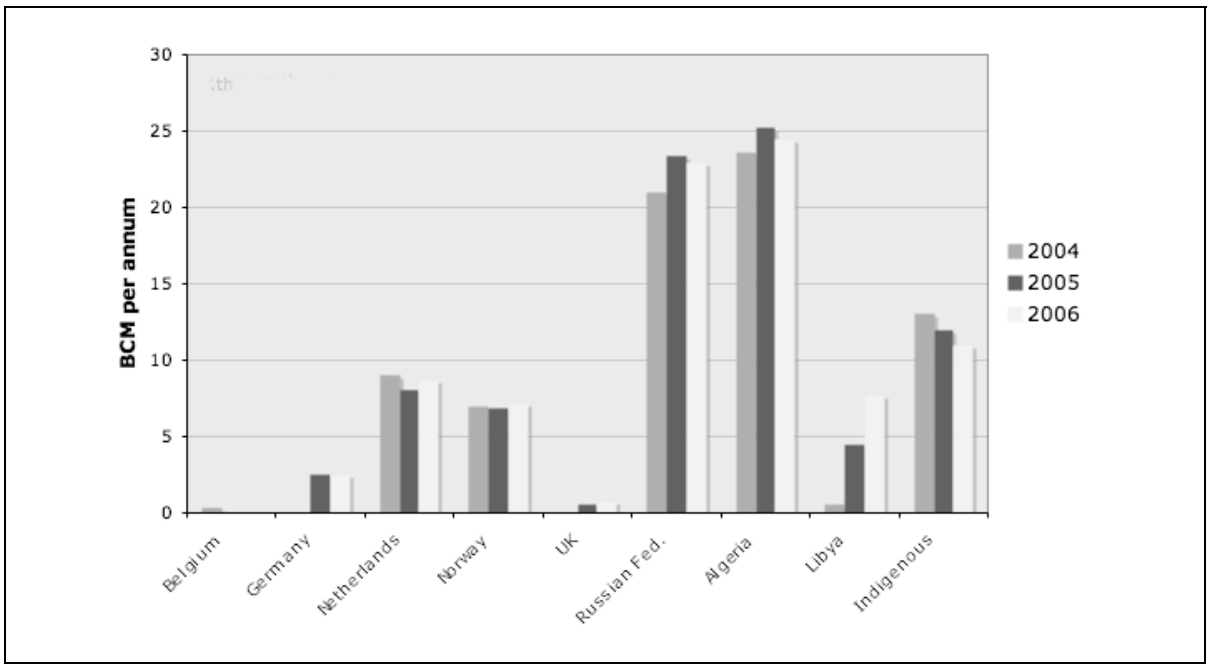
[218] Iran, Italy to sign oil deal today, 2008, *Tehran Times,* 9 January 2008, retrieved 22 July 2009 from: http://www.tehrantimes.com/index_View.asp?code=160914.

[219] Italy Oil Deal Renews Defiance of U.S. Iran Sanctions, 2001, *Tehran Times,* 2 July 2001, retrieved 22 July 2009 from http://www.tehrantimes.com/Index_view.asp?code=67478.

[220] ERG S.p.A. Annual Report, 2003, retrieved 23 July 2009 from http://www.erg.it/data/erg/en/investor Relations/financialStatementsReports/2002/Report-on-Operations/pdf/report_2002.pdf.

[221] How is natural gas imported to Italy, 2009, *ENI,* retrieved 22 July 2009 from http://www.eni.com/en_IT/faq/ gas-and-power/trading/faq-gp-import-gas-italy.shtml.

Figure 2.7. Natural Gas Imports of Italy between 2004 and 2006



Source: Oildrum, http://europe.theoildrum.com/node/4361.

traditional natural gas sources of Italy for more than three decades.[222] The domestic gas supplies, on the other hand, are in a process of depletion. Although the national energy giant ENI continuously searches for new oil and gas fields in Northern Italy and in the continental shelf of the Adriatic Sea, there is a downward trend in indigenous gas reserves. In order to compensate this decline of own resources and to solve the 'diversification of supplier' problem, Italy has recently intensified its relations with Libya. Between 2004 and 2006, the natural gas imports of Italy from Libya doubled every year. Following the lifting of sanctions on Libya in April 2004[223], international energy companies have been eager to enter the country to explore its largely undeveloped oil and gas reserves. Italy has traditionally close economic ties with this country and is urgently in need of diversifying its energy suppliers. Therefore, Libya is perceived as the best alternative energy supplier

[222] This long period of energy trade may be evaluated as a proof of reliability of supplier. From this point of view, Russia and Italy has long been natural gas partners. See: 40th Anniversary of the Russian gas supplies to Italy, 2009, *Gazprom,* retrieved 10 December 2009 from http://www.gazprom.com/about/history/events/italy40/.

[223] Italian government put excessive pressure at the EU level to lift the sanctions imposed on Libya. Although Italy argued that the main reason lifting santions is related to help Libya control illegal immigration, the main concern of Itailan goverment is the untouched oil and gas fields of Libya, see: EU agrees to lift Libya sanctions, *BBC,* 22 September 2004, retrived 22 July 2009 from http://news.bbc.co.uk/2/hi/europe/3680686.stm.

for Italy. The early signals of Italian interests on Libya's energy fields emerged when the governments agreed on 'Green Stream' project in 2003. The pipeline was inaugurated on 7 October 2004 by Italian Prime Minister Berlusconi and Libyan President Muammar Gaddafi. The 540 km long pipeline has an annual capacity of 11 bcm of natural gas and had a cost of 4.6 billion Euros.[224] Moreover, national oil company of Libya (NOC) and ENI had already agreed on future energy development plans particularly in Western Libya Gas Project In 2007, ENI signed a strategic agreement with Libya which strengthened its already dominant position in the country and paved the way for increased production of oil and gas in that country. ENI's activities in Libya targets both oil and gas production in Libya's untouched reserves.[225] Moreover, the relations between Italy and Libya have tightened after Italy expressed deep sorrow and apologies for the abuses during the colonial era and accepted to pay repercussions totaled to 4.5 GBP in 2008. The rapprochement between Libya and Italy has further developed after the official visit of Colonel Gaddafi to Rome in June 2009.[226] In addition to the pipelines, Italy also tries to diversify gas suppliers by LNG imports. However, LNG imports constitute a very small part of total gas imports of Italy. Interestingly, Italy has only one LNG regasification terminal in Panigaglia. Algerian LNG dominated the LNG market in Italy with an annual flow of 3 bcm. Although Nigeria and Egypt exported Italy 4 and 1 bcm of LNG respectively in 2004, their gas trade has shifted to France after 2005.[227] This shift is clearly indicates how delicate are the balances among member states when main energy supplies are at stake. Therefore, a potential cooperation field, in that sense, may easily turn into a rivalry between two member states.

Similar to the cases in oil and gas market, Italy imports almost all the necessary coal for its economy. In more concrete terms, the total necessary coal for the economy is about 25 million tons of coal whereas only 0.1 million tons of this amount is produced by domestic

[224] Libya-Italy Pipeline Gas sold out, 2005, *Enterpreneur,* 18 July 2005, retrieved 22 July 2009 from http://www.entrepreneur.com/tradejournals/article/134094667.html.
[225] Italian company extends oil, gas contracts with Libya, 2008, *BBC Monitoring European,* 20 June 2008, retrieved 23 July 2009 from http://proquest.umi.com/pqdlink?Ver=1&Exp=12-21-2014&FMT=7&DID=1497754301&RQT=309.
[226] Day, Michael, 2009, "Colonial sins are forgiven as Gaddafi pitches his tent in Italy", *The Independent,* 10 June 2009, retrieved 24 June 2009 from http://www.independent.co.uk/news/world/europe/colonial-sins-are-forgiven-as-gaddafi-pitches-his-tent-in-italy-1701108.html.
[227] European Gas Market, 2008, op-cit.

resources. From this point of view, Italy is a completely coal dependent country. The primary suppliers of coal are South Africa (20 percent), Colombia (13 percent) and Australia (12 percent).[228] Italy also imports coal from some other countries such as China, the US, Indonesia and Poland. Among all, it is clear that Italy has already achieved a certain degree of diversification as far as coal supply is concerned. Moreover, most of the supplies come from remote coal sources, which provide somehow an advantage to Italy. In that sense, Italy is not dependent on a regional actor.

2.4.3.3. Italian Government's Policies towards Energy Security

Italian foreign policy has increasingly become more assertive in the recent years due to three main factors: (1) poor domestic energy reserves, (2) increasing energy demand, and (3) international competition for energy security. The activities of officials in government departments consider all these factors in shaping the energy policy of Italy. Therefore, Italy has recently been in a process of reorientation of its energy policy as a part of its foreign policy. When the traditional energy policy of Italy is examined, certain points can be identified as peculiar characteristics of Italian. First of all, Italy is geographically very disadvantageous when compared to other bigger member states. Italy does not have any important oil or gas reserves like the UK has or does not have any coal reserves like Germany has. Secondly, Italy has consciously discredited nuclear energy as a part of its national energy policy. Germany, UK and France have preferred nuclear energy as a part of their energy policy. This is an important disadvantage of the country in a potential race for great power status on a regional basis because having nuclear capability requires high level of investment and time. Thirdly, Italy has traditionally preferred oil in early period of industrialization due to the lack of indigenous coal reserves. With the increasing use of natural gas, some of the generating stations previously used oil or coal have turned into natural gas stations. Therefore, the country is heavily dependent on oil and gas supplies. Finally, Italian government did not pursue a policy of diversification until recently. Most of the oil and gas is provided by a few suppliers. All these characteristics of Italy make the country one of the most fragile EU members as far as energy security considered. Italy is

[228] Global Overview of CMM Opportunities, 2009, *US Environmental Protection Agency,* retrieved 25 June 2009 from http://www.methanetomarkets.org/m2m2009/documents/toolsres_coal_overview_ch16.pdf.

not only disadvantageous among other bigger member states, but also open to the influence of energy suppliers. The government, on the other hand, is well aware of the situation:

> Within the context of growing demand for hydrocarbon fuels, and the stiffening competition for supplying them, Italy is in danger of finding itself at a considerable disadvantage. As a result of its rejection of nuclear power (which is once again under consideration) and of its greatly reduced use of coal to generate electrical energy and still limited development of renewable resources, Italy has gradually shifted to gas and, in proportion to its energy needs, currently uses more gas than any other European country… It has been estimated that by 2025 our country will be importing practically all the raw materials required to satisfy its energy needs.[229]

Being aware of the current situation, Italian Government has made a self-criticism for pursuing individual policies similar to other EU members and contented that EU members should develop a unique energy policy based on certain criteria defined by the Community institutions. The government put forth three main targets of an energy policy, which are: environmental sustainability, supply security and competitiveness.[230] For the first one, environmental aspect of the issue, the government invests in renewable technologies, but also has concerns that their share in energy supply will be very limited. Despite Italian government renounced nuclear energy because of environmental reasons, this option remains to be an alternative for Italy in the future. Secondly, government questions reliability of relying heavily on Russian resources and stresses the importance of diversification for the European countries as a whole. Thirdly, the government tries to improve competitiveness in a market where prices are very high due to excessive dependence on oil and gas. The Italian government argues that opening up of the market since mid-1990s when totally completed would provide competitive and stable prices both for industrial and residential consumers. However, the dominant position of ENI sponsored by the government overshadows the sincerity of this official discourse.

In light of these objectives, Italian government defined three main actions: (1) actions to be implemented at national level, (2) at EU level and (3) at supplier level. The priority areas at national level are diversification of fuel mix, construction of gas transportation and storage facilities, and proper functioning of a competitive energy market. In the first

[229] The situation in Italy, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/EN/Politica_Estera/Temi_Globali/Energia/Situazi_Italiana.htm.
[230] Objectives, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/EN/Politica_Estera/Temi_Globali/Energia/.

priority area, the policy makers stress the importance of developing renewable technologies as well as introducing energy efficiency measures. However, the main argument of the government is to discuss nuclear energy which is currently banned in Italy. The second priority area to be implemented at national level is to develop infrastructure for natural gas. As the leading natural gas consumer of Europe, the government obviously points at the requirement for new pipelines, storage facilities and LNG regasification terminals. As for the third priority area, the Italian policy makers contented that liberalization of energy markets are very important. Even more, they argue that gas market liberalization should be open to international level since the sources of gas are not limited by the EU borders.

As for the actions to be implemented at the Union level, Italian government criticizes all member states for their individualistic behavior. Italy perceives energy as an issue that should be dealt with at the Union level. According to the government officials, the issues from liberalization timetable to energy infrastructure planning could be better coordinated at the EU institutions.

The final action area of the Italian government for conducting energy politics is the supplier level. Since a unique policy cannot be achieved by the member states, according to Italian policy makers, their county should deal personally with its current problems. The government's statement is very clear on providing energy security:

> …where energy supplies are concerned no country can allow itself the luxury of waiting for the European Union to achieve the objectives it has set itself… While gas consumption is growing steadily in our country and in the rest of Europe, the monopolist Gazprom is investing enormous resources purchasing assets abroad in order to enter the markets of Western Europe. This combination of growing Russian and European demand, new opportunities in the Chinese market and the age and shortcomings of the Russian facilities, creates a very real risk that in the medium term Russia will no longer be able to honour its existing contracts with its European partners. The countries most at risk from this situation will be those most dependent on imports, such as our own.[231]

When combined with the latest Russian conflict with Ukraine and Belarus, these problems of Russia as a supplier make Italian decision makers more anxious about their

[231] Major Interventions, 2009, *Ministry of Foreign Affairs,* retrieved 25 July 2009 from http://www.esteri.it/MAE/ EN/Politica_Estera/Temi_Globali/Energia/Interventi_Importanti.htm.

supply problem. Russia is the main supplier of Italy and relations with Russia has been clearly planed by the Italian energy authorities. However, heavily relied on Russia and Algeria has brought certain deficits for Italian energy, thus foreign policy. In order to diminish this problem, Italian officials envisage a plan to enhance energy relationship with the countries of southern shores of the Mediterranean. Although it was not overtly mentioned in documents, Italians pointed Libya by this explanation. The current agreements and high level visits clearly affirm this situation. Furthermore, what clearly labeled in foreign policy documents of Italy is the role of Turkey and the Iranian and Caspian resources. This shows that Italy is urgently in need of diversification. Since they do clearly explain the risk of Russian gas, they will probably be one of the most committed defenders of Turkey's transit role.

2.4.4. Energy Policies of the United Kingdom

Last but not least the energy policies of the UK should be evaluated as one of the potential European great powers in a multi-polar structure. When compared with other European powers, the energy mix of the UK depicts a more even distribution between different types of fuels. The most prominent difference of UK from other states have been its production capacity. Even until recently, the UK was one of the few self sufficient countries of the EU as far as energy consumption is considered. However, depletion of domestic reserves as well as increasing demand has turned UK to become a net energy importer. However, they are still the least energy dependent EU member among the other potential great powers. A brief explanation of the energy profile of UK would help to clarify British expectations on energy policy and their impact on energy decision making. Table 2.8 on the next page provides a general outlook for UK energy demand-supply structure.

2.4.4.1 Energy Demand in the United Kingdom

The United Kingdom is the third in Europe after Germany and France as far as energy consumption is considered. The total energy supply in UK is 231 million toe which is almost equal to 2,5 percent of world energy demand. Interestingly, the UK exports large amounts of energy resources to other countries. Therefore, after a foreign trade balance

analysis, UK has a capacity to satisfy the 80 percent of the domestic energy demand by own resources. UK energy market depicts a more evenly distributed fuel dependency which provides the country leverage in energy diversification. In other words, with the current structure of fuel type, UK has already achieved certain degree of diversification recommended by the European Commission. As almost relevant in all other countries, oil has a dominant position among other fuel types. The demand for oil is about 38 percent of total demand whereas gas demand is almost 35 percent. Coal and nuclear power follows these two with shares of 18 and 9 percent respectively. Other energy resources such as combustible renewable, hydro or solar energies do not have a high demand in the UK.

The United Kingdom has long been active on the global oil market particularly after Winston Churchill had convinced the government to switch the Royal Navy from coal to oil in early 1900s.[232] Mostly thanks to the North Sea oil fields[233], the UK has been one of the main oil produces together with Norway. However, after the peak point of production in 1999, UK's oil production depicted a declining graph.[234] It is estimated that almost 70 percent of North Sea reserves had already been recovered by the end of 2006 and the production is expected to fall to one-third of 1999 figures by the end of 2020.[235] Whatever the underlying cause of depletion, the indigenous oil reserves in the UK are decreasing. Parallel to this trend, demand for oil shows a very slow change. In contrary to the demand in oil, the share of natural gas is continuously increasing as in all other European countries. Although there was a short period of decline in gas demand due to global economic crisis,[236] a strong upwards trend for a mid-term period is expected in UK's gas demand.[237]

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[232] The actual purpose of Churchill was not merely control the world oil market at that time. Warships functioning with oil could gather way with higher speed and had a more manevour capacity when compared to the warships functioning with coal. However, his decision to switch the Royal Navy to oil brought a real pressure on UK government to search for secure oil fields. For more details, see: Yergin, Daniel, 1991, The Prize: The Epic Quest for Oil, Money, and Power. New York: Simon & Schuster

[233] This area covers the Atlantic Margin of the UK which includes the west of Shetland.

[234] Zittel, Werner, "Analysis of the UK oil production", 2009, retrieved 18 August 2009 from http://www.peakoil.net/Publications/06_Analysis_of_UK_oil_production.pdf.

[235] Bowers, Simon, 2010, "North Sea oil 'could last at least a decade'", *The Guardian,* 24 February 2010, retrived on 12 March 2010 from http://www.guardian.co.uk/business/2010/feb/24/plenty-of-north-sea-oil.

[236] UK gas demand falls as recession bites, 2009, *Reuters,* 17 February 2009 from http://www.reuters.com/article/ idUSLH01543920090217.

[237] UK gas demand is forecast to rise from 91 bcm to 100 bcm, 2009, *PRinside,* 12 November 2009 from http://www.pr-inside.com/uk-gas-demand-is-forecast-to-r1579998.htm.

Table 2.8. Energy Balance for the United Kingdom

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	10679	80010	0	71987	19663	396	401	3487	0	0	186623
Imports	31655	61465	27278	18879	0	0	0	0	884	0	140640
Exports	-445	-52222	-29184	-9329	0	0	0	-68	-238	0	-91485
International Marine Bunkers	0	0	-2308	0	0	0	0	0	0	0	-2308
Stock Changes	-601	-376	-860	-498	0	0	0	-10	0	0	-2344
Total Primary Energy Supply	**41288**	**88877**	**-5073**	**81039**	**19663**	**396**	**401**	**3888**	**646**	**0**	**231126**
Transfers	0	-2704	3035	0	0	0	0	0	0	0	331
Statistical Differences	-155	-88	-50	-26	0	0	0	1	0	0	-318
Electricity Plants	-34738	0	-585	-20476	-19663	-396	-364	-2860	31653	0	-47430
CHP Plants	-239	0	-358	-3535	0	0	0	-360	2272	0	-2220
Heat Plants	-315	0	-57	-1715	0	0	0	0	0	1347	-740
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-86253	84608	0	0	0	0	0	0	0	-1646
Coal Transform.	-2123	0	-196	0	0	0	0	0	0	0	-2319
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transform.	4	167	-191	-4	0	0	0	0	0	0	-23
Own Use	-828	0	-4784	-6222	0	0	0	0	-2426	-72	-14331
Distribution Losses	-173	0	0	-860	0	0	0	0	-2666	0	-3699
Total Final Consumption	**2721**	**0**	**76350**	**48201**	**0**	**0**	**37**	**669**	**29479**	**1275**	**158731**
Industry sector	**2178**	**0**	**6963**	**11122**	**0**	**0**	**0**	**126**	**10002**	**836**	**31228**
Transport sector	**0**	**0**	**55062**	**0**	**0**	**0**	**0**	**209**	**733**	**0**	**56004**
Other sectors	**543**	**0**	**4450**	**36344**	**0**	**0**	**37**	**333**	**18744**	**438**	**60889**
Residential	528	0	3026	28203	0	0	0	187	10015	52	42012
Commercial and Public Services	9	0	823	6431	0	0	0	77	8374	386	16101
Agriculture / Forestry	3	0	285	156	0	0	0	60	355	0	859
Fishing	0	0	0	0	0	0	0	0	0	0	0
Non-Specified	3	0	316	1553	0	0	37	8	0	0	1917

* in thousand tons of oil equivalent (ktoe) on a net calorific value basis.

Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=GB.

In late 1970s, discoveries of new gas fields in the North Sea complemented by the Conservative privatization of oil, coal and electricity generation in 1980s. The increasing demand for gas has begun in that period when privatized power companies made a "dash for gas".[238] Today, although there is a trend of depletion in North Sea gas reserves similar to depletion of oil reserves, new field developments and revisions in established fields increases the potential indigenous gas reserves in UK. [239] However, the increase in potential reserves could not compensate the increasing demand and could not prevent UK to become a net natural gas importer in the recent years. The use of other fuel types is also increasing. For example, despite the opposite demand structure of other Western European Countries, the coal demand in UK reached to a historical high level in 2006.[240] However, the amount of imported coal is three times higher than domestic production.

Moreover, the most of the existing coal mines were closed down in recent years. The technology of generators operated by coal is also old-fashioned.[241] Therefore, the increase in demand of coal is not a promising solution to the question of energy in the UK. However, the debate on nuclear power may be an alternative solution to the problems associated with UK's increasing energy dependence. The existing nuclear power stations provide less than 10 percent of the TPES in the UK. However, it is important because almost 20 percent of the electricity generation is provided by the 24 nuclear reactors dispersed around the UK. Despite the aggressive struggle of Greenpeace and refusal of nuclear energy by the Scottish government, the energy policy makers in the UK are highly committed to the idea of building new nuclear plants in order to compensate the decreasing efficiency of older nuclear reactors.[242]

A sectoral analysis of demand for energy in UK is also worth to consider in order to understand the motives under British energy policy making process. First of all,

[238] Wheeler, Brian, 2004, "The politics of power", *BBC,* 22 April 2004, retrieved 8 August 2009 from http://www.energybulletin.net/node/105.
[239] UK Gas Reserves and Estimated Ultimate Recovery 2009, 2009, *Department of Energy and Climate Change,* retrieved 9 August 2009 from https://www.og.decc.gov.uk/information/bb_updates/chapters/Table4_4.htm.
[240] Boom not enough to re-open UK coal pits, 2007, *The Financial Express,* 21 June 2007, retrieved 5 August 2009 from http://www.financialexpress.com/news/boom-not-enough-to-reopen-uk-coal-pits/202224.
[241] Rohrer, Finlo, 2004, "Can Britain go back to coal?", *BBC*, 18 October 2004, retrieved 18 August 2009 from http://www.energybulletin.net/node/2706.
[242] New nuclear plants get go-ahead, 2008, *BBC,* 10 January 2008, retrieved 22 August 2009 from http://news.bbc.co.uk/2/hi/uk_news/politics/7179579.stm.

transportation sector leads in energy consumption in the UK with a share of 35 percent of TPES. As it is shown in Table 2.8, transportation sector solely uses oil and it correspondts to more than 72 percent of the total oil consumed in the UK. Therefore, use of more efficient hybrid cars or public transportation based on other electricity may decrease dependency on oil. Secondly, because of its climate, a high proportion of energy is used for purposes of heating. A total of 34 percent of TPES is used by residential and other sectors for heating purposes. The rest of the energy is used by industrial sectors. Most of the energy used by industrial sector, residential and other sectors are mainly supplied by natural gas plants as well as coal generators and nuclear power plants. To sum up, the increasing gas demand is an obvious fact for UK's energy strategy. Since the domestic resources are limited, the British energy policy makers should find ways to secure gas supply in the near future. Therefore, it would be helpful to analyze the energy suppliers of the UK. [243]

2.4.4.2. Energy Suppliers of the United Kingdom

The United Kingdom has a more advantageous position when compared to other European great powers in terms of fuel type diversification. Although the use of oil and gas is more than other type of fuels, coal and nuclear resources are listed in the energy mix as well. To begin with natural gas, it is fair to say that there will be a growing import requirement in the years ahead. Although the indigenous reserves in the UK continental shelf may be promising, the current level of production is decreasing, which in turn will require to search for external resources in order to satisfy the existing demand structure. Currently, Great Britain imports natural gas from Norway and continental Europe via pipelines and LNG from other resources. Vesterled, Langeled and Tampen Link pipelines provides Norwegian gas to UK, which accounts for around 25 percent of the total gas imports of the country. However, further developments in upstream sector in Norway are promising for UK gas market. The inauguration of the Norwegian Ormen Lange field is expected to meet 20 percent of UK's future gas requirements for the next 30-40 years.[244]

[243] For a detailed analysis of UK energy consumption, see: Energy Consumption in the United Kingdom, *Energy Publications,* London: Department of Trade and Industry, retrieved on 20 May 2009 from: http://www.decc.gov.uk/en/content/cms/statistics/publications/ecuk/ecuk.aspx.
[244] Norway increases EU's security of gas supplies, 2009, *Norway Mission to the EU,* retrieved 20 August 2009 from http://www.eu-norway.org/news/security_of_gas_supplies/.

On the other land, UK-Belgium interconnector with a capacity of 25 bcm natural gas helps UK to connect mainland European gas network. By this way, UK not only has the ability to export natural gas to Europe, but also has a chance to provide natural gas in cases of excessive gas demand.[245] In addition to pipelines, UK has recently agreed with Sonatrach, Algeria's energy company, for LNG deliveries. For this purpose, UK expanded its terminal facilities in order to increase the LNG trade. The capacity of Isle of Grain, the UK's oldest LNG import terminal, has been increased to 9.8 million metric tons of LNG a year. [246] The Grain terminal currently receives LNG from Algeria. In addition, two more LNG terminals, South Hook and Dragon in Milford Haven have been inaugurated in the recent years. These two terminals are currently the import points for the Qatar gas and have a capacity to provide 25 percent of the UK gas demand. [247]

Similar to gas, UK has long been a self-sufficient country as far as oil is considered. However, UK's North Sea oil is also depleting and refiners search for new external resources.[248] Primary oil supplier of the UK is Norway. Russia, Algeria and Middle Eastern oil have shares less than 10 percent each in UK's oil imports. [249] However, the level of oil dependence of the UK is very low and the main purpose of current oil imports is to blend crude oils imported and produced in UK in order to get most efficient fuel type to use in plant. On the other hand, UK is much more dependent in terms of coal imports. Almost three-quarters of UK's coal are provided from external resources. Russian coal has dominated the British coal market. South Africa is also an important coal supplier of

[245] The Future of UK Gas Supplies, 2004, *Parliamentary Office of Science and Technology Postnote No: 230,* October 2004.
[246] LNG Sales, 2009, *Enterpreneur, 23* February 2005, retrieved 22 August 2009 from http://www.entrepreneur.com/tradejournals/article/194674171.html.
[247] For new LNG import ports of the UK, see: First liquid gas delivery in port, 2009, *BBC,* retrieved on 22 August 2009 from http://news.bbc.co.uk/2/hi/uk_news/wales/south_west/7952415.stm; Liquified Natural Gas, *South Hook LNG Company Ltd.*, retrieved on 22 August 2009 from http://www.southhooklng.co.uk/cds-web/view.do?id=1083.
[248] Energy Markets Outlook, 2007, *Department for Business, Enterprise & Regulatory Reform, Pub 8629/0.5k/ 10/07/NP URN 07/P28*, pp.79-81
[249] Renewable Energy Policy Review United Kingdom, 2004, *European Renewable Energy Council,* retrieved 22 August 2009 from http://www.erec.org/fileadmin/erec_docs/Projcet_Documents/RES_in_ EU_and_CC/United_ Kingdom.pdf, pp. 3.

UK.[250] Australia, Colombia and Indonesia are also among the countries that provide coal to UK energy markets.

2.4.4.3. The British Government's Policies towards Energy Security

The UK's declared energy policy is clearly summarized in a white paper issued in May 2007 by the Department of Trade and Industry.[251] The name given to the white paper (Meeting the Energy Challenge) already deciphers the anxiety of British government about providing energy resources in the near future. This paper is important because it is the most recent document that examines the priorities of British energy strategy and defines a clear path for the UK in various field of energy. Therefore, examining this document may help to clarify British Government's policies towards energy security. The white paper mainly defines two long-term objectives for the well-being of the British economy and public-health: (1) reducing carbon emissions and (2) ensuring clean, secure and affordable energy sources. As for the former, the government refers to various other documents issued by international institutions about the environmental challenges of climate change and stressed the importance of a collective global effort for an ultimate solution. As a part of a global strategy, the British government mentions two main strategies to cope with this situation. First one is to save energy and second one is to develop cleaner energy supplies. The government put clear schemes and determined targets to save energy in business, households, transport, and public sectors.[252] As for the cleaner energy supplies, the government takes particular attention on renewable and more efficient heating and power generating systems which could provide energy efficiency as well as lower carbon emissions.[253] In addition, a special part is devoted to the significance of nuclear power for UK's energy supply diversification. According to the government, there are advantages and disadvantages of nuclear power and further argued that meeting carbon emission reduction goal by excluding nuclear power as an option would be more expensive. Thus, the British Government concludes that it is in public interest to allow private sector

[250] Severn Barrage Costing Follow-On Analysis to The Renewable Energy Forum Ltd, 2008, *IPA Energy,* retrieved 22 August 2009 from http://www.ref.org.uk/Files/ipa.for.ref.severn.barrage.study.2.pdf, p. 41.
[251] Meeting the Energy Challange: A Whitepaper on Energy, May 2007, *HM Government Department of Trade and Industry.*
[252] *Ibid.,* pp.48-76.
[253] *Ibid.,* pp.83-105.

companies the option of investing in new nuclear power stations.[254] The second long-term objective of the British government is ensuring clean and secure energy sources with affordable prices. Government of the UK defines two probable challenges. First one is about UK's increasing reliance on imports in a world of increasing energy demands. Second one is the requirement for private sector investment in energy infrastructure within the UK. To overcome this problem, British Government outlined several significant points. Firstly, the domestic reserves should be produced in the most efficient way. This includes strategies to maximize economic production of domestic coal reserves as well as offshore oil and gas production. In addition to this, the government confirms the necessity of providing a legal framework which promotes investment in energy infrastructure by private companies. According to the government, these steps should be coupled with an international effort. At the European level, an open European energy market should be functioning properly. Beyond the EU, on the other hand, the member state governments should work for more transparency by using bilateral relations or international organizations such as International Energy Agency.[255]

To sum up, the British government declares a dual strategy against the challenges of energy security. First pillar of this strategy aims to control the increasing energy demand energy saving methods. Secondly, the government works on different policies to provide security of supply. Since the late 1960s, North Sea energy has contributed over 200 billion pounds to the British economy.[256] The depletion of reserves in those fields enforces the Government of UK to find alternative resources. UK's historical presence in energy politics may facilitate bilateral relations with producers. However, UK needs more than an individual effort in order to fulfill its objectives defined in the energy white paper. A collective European action, for example, is necessary to tackle the problems associated with climate change and to form a liberalized energy market.

[254] *Ibid.*, pp. 180-216.
[255] *Ibid.,* pp. 19-21.
[256] UK faces future without North Sea oil, 2004, *Reuters*, 14 January 2004, retrieved 18 August 2009 from http://www.energybulletin.net/node/105.

CHAPTER III

TURKEY IN THE NEW ENERGY ENVIRONMENT

3.1. Overview of Turkey's Energy Security

The previous chapter has already gone over the policies and activities that European Union and some member states implement for a more secure energy supply. Generally speaking, the foreign policy issues of an international actor may be evaluated from two different perspectives. The first perspective is the policies written on documents while the second one is about the actual facts and activities of that specific actor. The former one is composed of declarations or agreements issued by government officials or leaders. The latter one, on the other hand, is composed of the de facto activities that international actor engages in implementing foreign policy. These two perspectives of foreign policy are not mutually exclusive. For example the activities of a state's foreign policy may completely be in line with its foreign policy doctrine. On the other hand, these two perspectives may be completely different. For example, despite defending peace in all written documents, an international actor may try to use force under certain conditions. Therefore, what is written in documents should not necessarily show an actor's actual foreign policy priorities. Vice-versa is also relevant. What is written in the foreign policy papers of an actor cannot be regarded as the limits of activity for that actor.

It is clear from both policy perspectives mentioned above –written documents explaining the energy policies and de facto activities of member states for providing energy security– that alternative ways for receiving energy resources are critically

important for the EU. As an incumbent transit country[257], Turkey may be one of the best alternatives for the Union's diversification question. Turkey is geographically located between energy demanding European countries and energy rich suppliers. Therefore, among the energy policy circles both in Turkey and in Europe, Turkey's role in providing energy to the EU member states is beyond debate.

The main questions are different: Whether the energy provided by Turkey to the pipelines will be secure or not, and whether Turkey will have a role of a transit country or an exporting country are the main questions which will probably dominate the future developments in energy security issues between Turkey and the European countries. The details and prospects for the future will be discussed in the following chapter. Therefore, Turkey's energy policies should be clearly examined as well as the current Turkish position in energy issues.

In this chapter, the energy outlook of Turkey is examined in detail. The demand and supply figures as well as Turkey's own energy resources will be evaluated. Because much of the discussion is centered on 'Turkey's role as an energy hub', this chapter also includes a subsection which examines energy rich neighboring states. At the end of this chapter, the findings will help us to understand how the Turkish energy demand and supply figures will develop and how Turkey would contribute to the energy question of the European Union members.

3.2. The Energy Outlook of Turkey

Similar to the previous chapter, which examined the energy outlook of European Union at the member state basis, the energy outlook of Turkey will be better analyzed by starting with demand and supply figures. As it is examined in detail below, the energy consumption

[257] Currently Turkey sends natural gas to Greece via Turkey-Greece interconnector pipeline which was inaugrated in November 2007. Several months before that, the EU Commission approved declared its support for the Greece-Italy pipeline which will pave the way to transfer natural gas from Turkey to Italy via Turkey-Greece pipeline.

Table 3.1. Energy Balance for Turkey*

Supply and Consumption	Coal	Crude Oil	Petroleum Products	Gas	Nuclear	Hydro	Geo-thermal, Solar, etc.	Combustible	Electricity	Heat	Total*
Production	13085	2134	0	745	0	3805	1392	5170	0	0	26330
Imports	13580	23892	13071	25171	0	0	0		49	0	75764
Exports	0	0	-6557	0	0	0	0	0	-192	0	-6750
International Marine Bunkers	0	0	-971	0	0	0	0	0	0	0	-971
Stock Changes	-217	303	-508	49	0	0	0	0	0	0	-374
Total Primary Energy Supply	**26448**	**26329**	**5034**	**25965**	**0**	**3805**	**1392**	**5170**	**-143**	**0**	**93999**
Transfers	0	0	0	0	0	0	0	0	0	0	0
Statistical Differences	21	-85	-16	0	0	0	0	0	0	0	-80
Electricity Plants	-11132	0	-836	-11609	0	-3805	-92	-36	14498	0	-13011
CHP Plants	-185	0	-208	-1680	0	0	0	-7	663	958	-459
Heat Plants	0	0	0	0	0	0	0	0	0	0	0
Gas Works	0	0	0	0	0	0	0	0	0	0	0
Petroleum Refineries	0	-26314	26349	0	0	0	0	0	0	0	35
Coal Transf.	-2144	0	0	0	0	0	0	0	0	0	-2144
Liquefaction Plants	0	0	0	0	0	0	0	0	0	0	0
Other Transf.	0	71	-73	0	0	0	0	0	0	0	-2
Own Use	-296	0	-1573	-105	0	0	0	0	-725	0	-2698
Distribution Losses	-32	0	0	-21	0	0	0	0	-2134	0	-2187
Total Final Consumption	**12680**	**0**	**28676**	**12551**	**0**	**0**	**1300**	**5127**	**12160**	**958**	**73453**
Industry sector	**10192**	**0**	**3115**	**3338**	**0**	**0**	**121**	**0**	**5707**	**958**	**23432**
Transport sector	**0**	**0**	**14805**	**116**	**0**	**0**	**0**	**2**	**68**	**0**	**14990**
Other sectors	**2488**	**0**	**5113**	**8966**	**0**	**0**	**1179**	**5125**	**6386**	**0**	**29255**
Residential	2488	0	1956	6181	0	0	1179	5125	2964	0	19892
Commercial and Public Services	0	0	0	2784	0	0	0	0	3040	0	5824
Agriculture / Forestry	0	0	3157	0	0	0	0	0	368	0	3526
Fishing	0	0	0	0	0	0	0	0	13	0	13
Non-Specified	0	0	0	0	0	0	0	0	0	0	0

* in thousand tonnes of oil equivalent (ktoe) on a net calorific value basis.

Source: International Energy Agency, http://www.iea.org/stats/balancetable.asp?COUNTRY_CODE=TR.

and supply figures in Turkey has experienced a great change in the last two decades. With the rapid development of the economy and the increase in population, Turkey's energy requirements increased as well. In order to meet the increasing demand, Turkish policy makers engaged in a policy to develop relations with neighboring energy producers. The Iran-Turkey pipeline in 1996 and the Blue Stream pipeline between Turkey and Russia in 1997 are all the consequences of this policy. There are certain shortfalls in forming a supply and demand balance due to several reasons, such as insufficient storage capacity or seasonal divergence in consumption trend. However, the increasing energy consumption within Turkey naturally contributes to its role in European energy supply since it requires Turkey to develop its energy facilities and infrastructure as well as its relations with suppliers.

3.2.1. Energy Demand in Turkey

The energy demand of Turkey is far below than the leading EU Member States. The total energy consumption in Turkey is slightly above a quarter of the total German energy consumption and only equals to 42 percent of French annual energy consumption. This is, of course, depends on the difference between economic development levels of these countries as well as the sociological differences between these countries such as use of high standard public services or private cars. Whatever the underlying reason is, Turkey needs less energy resources when compared to Germany, France, Italy or the UK.

As the table 3.1 shows, Turkey needs nearly 75 million toe of energy resources. Among others, oil and petroleum products have the greatest share of Turkey's energy consumption figure. In more concrete terms, slightly less than one-third of the total energy consumption is provided by oil products. Approximately 70 percent of this amount is imported in the form of crude oil, whereas rest of that amount is composed of other petroleum products.

Oil is followed by natural gas and coal; each has a share of approximately 27 percent in total energy consumption. Half of the coal is provided by the indigenous resources of the country whereas almost all of the natural gas is imported from outer sources. A considerable part of both coal and natural gas is used in electricity plants. In other words, 40 percent of the coal and natural gas is used in order to generate necessary electricity

power for the national economy. While the consumption of coal follows a stable growth path, natural gas consumption in Turkish market grows at an enormous level for the last decade. The coal production in Turkey has grown from 25 million tones in 2004 to 34 million tones in 2009, which shows a 36 percent increase in a five years period.[258] However, the increase in use of natural gas is much more than in coal. In 1998, the use of natural gas in Turkish market was limited with 10 billion cubic meters. This amount has grown up to almost 38 billion cubic meters in the year 2008. The level of Turkey's natural gas consumption in 2015 is expected to be 57 billion cubic meters. [259]

Other type of energy resources such as hydro-power, renewable, geo-thermal or solar power constitutes a smaller share in Turkish energy market. The demand for these type of resources have only a total share of slightly more than 10 percent. Although there is an increase in wind-power generation systems recently, Turkey's wind potential is estimated to contribute only 4.2 million toe to the Turkish energy supply.[260] This amount is less than 5 percent of total energy demand. Moreover, the cost of building new wind plants is another challenge against the use of this potential.

A sectoral panorama of the energy demand in Turkey may also be helpful for understanding the structure of the market. The highest share of total energy consumption belongs to industry in Turkey with a share of 40 percent. Another 32 percent of the resources is consumed for residential purposes. The share of transportation is only 18 percent which is considerably below the levels of European countries. The rest is used in other sectors and for agricultural purposes. As the economy has experienced a growth during the mid-2000s, energy consumption level in industrial and transportation sectors have increased by 40 percent and by 20 percent, respectively. This huge increase in a five years period is mostly a consequence of the growth of economy after the economic crisis in 2001. However, it should also be noted that such kind of huge increases in demand may cause problems since it is difficult to find new energy resources.

[258] Kömür Sektör Raporu, 2009*, Türkiye Kömür İşletmeleri Genel Müdürlüğü,* Ankara, p. 15.
[259] 2008 Yılı Sektör Raporu, 2009, *BOTAŞ,* Ankara, p. 9.
[260] Acar, Esin and Ahmet Doğan, 2008, *Potansiyeli ve Çevresel Etkilerin Değerlendirilmesi,* VII. Ulusal Enerji Sempozyumu Değerlendirmesi, pp. 676-8.

Turkish energy supply mix has some similarities and differences when compared to other European Union members. As in the case of EU members, Turkey's energy demand is heavily relied on hydro-carbon resources, most of which are imported from external suppliers. On the other hand, Turkey has no nuclear power generation system at the moment. The construction of a nuclear reactors in Turkey has always been discussed a part of energy policy agenda. However, there is a strong opposition against a nuclear program by different groups in Turkey. In light of the above mentioned demand structure of Turkish energy market, it is quite important to understand the supply mechanisms of this market. It is important because the level of energy dependency and relations with suppliers are not only important for providing its own energy security, but also necessary for increasing Turkey's chance to become a 'bridge or hub' for the energy trade between suppliers and consumers of energy resources.

3.2.2. Energy Supply in Turkey

Energy consumption of an international actor generally depends on its ability to provide the necessary supply. Without the ability to supply the necessary resources, the whole economy of that country may fall into a burden, which would accompanied with great social disasters and even threats to public heath and security. Therefore, providing necessary energy resources is a vitally important task of all statesmen, who search for state survival. Insomuch as an international actor provides energy resources, the power and safety of that state is in secure. From this point of view, as in all other countries, Turkish policy makers have two alternatives for finding a solution to the energy supply problem. First one is to increase the use and efficiency of own resources. Second one is to develop long-term relationships with supplier and transit countries of energy resources.

3.2.2.1. Turkey's Energy Production

In the Turkey's energy mix, coal has a dominant position as far as Turkey's own resources are considered. The current level of coal production in Turkey is 27 million toe which equals to 28,5 percent of the total energy supply of Turkey. Coal has a significant share in Turkey's energy picture not because Turkey is a coal rich country, but because Turkey does not have sufficient amount of any other energy resource. As far as the current

level of coal reserves are considered, Turkey can be figured as a lower-level county in terms of hard coal and middle-level country in terms of lignite.[261] The domestic coal reserves of Turkey for these two type of resources are 1,33 billion tones for hard coal and 10,4 billion tones for lignite.[262] Figure 3.1 shows the map of existing coal field in Turkey. The coal mines are dispersed in many different regions of the country. This wide-spread coal fields, on the other hand, diminishes the economic benefits of the coal reserves. Moreover, only a small part of the coal potential is hard coal, which is located around Zonguldak coal basin.

Map 3.1. Coal Fields in Turkey

Source: Republic of Turkey Ministry of Energy and Natural Resources, http://www.enerji.gov.tr

Despite the fact that more than two billion tones of additional lignite reserves are discovered by the state agency of mineral research and exploration, the current energy

[261] Coal Information and Documents*,* 2009, *Republic of Turkey, Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=komur_EN&bn=511&hn=&nm=40717&id=40729.

[262] Hard coal is also known as antracite and has a high-calorific value. On the other hand, lignite –also known as brown coal– is considered as the lowest rank of coal which has a very low energy density. Lignite is not regarded as an important and efficient energy resource. Because of its low calorific value, it is economically not feasible to transport lignite and it is generally consumed in thermal power plants which are constructed nearby the coal fields. Generally, hard coal provides approximately 27-28 terajules whereas lignite provides only around 15 terajules in kilotonnes. In other words, 100 tones of hard coal equals to 62 toe, while 100 tones of lignite equals only to 40 toe.

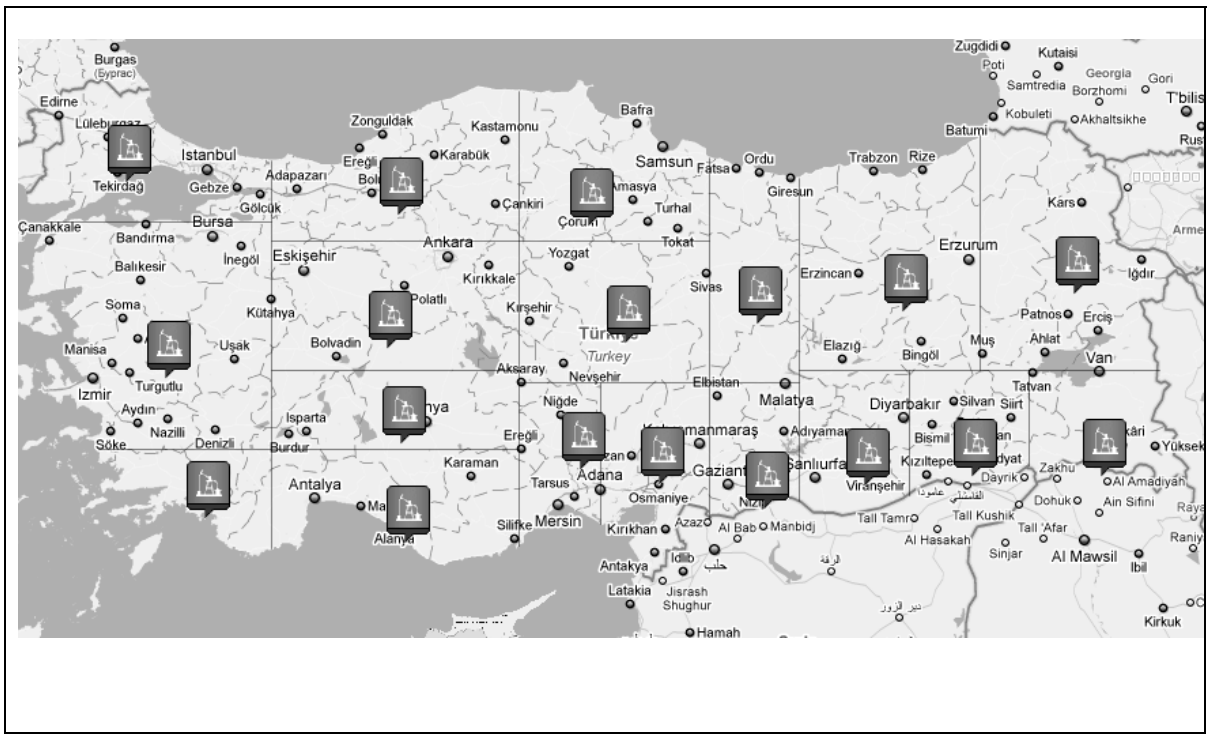
demand cannot be satisfied by the existing fields. Because all hard coal reserves of Turkey equals only to 820 million toe while the lignite reserves only provides 920 million toe of energy supply.[263] In other words, even if there was a mechanism to extract all these coal resources without any production cost, it would only be sufficient for Turkey's energy need for less than 20 years if solely coal is used in energy production. With current production levels, on the other hand, indigenous coal reserves of Turkey last more than 60 years. This means that, Turkey may benefit from indigenous coal resources in order to ease the negative effects of its energy dependency, yet should continuously develop new projects for increasing the level and diversifying the types and routes of external energy resources.

The internal production of other two hydro-carbon resources, oil and natural gas, is comparably very low when compared with coal. There are some specific reasons for the low production rate as far as oil and gas is considered. As it is shown in Figure 3.2, the number of oil or gas development fields is geographically limited. Coal resources are more evenly distributed throughout the world while the oil and gas resources are concentrated on specific regions. Geographical location of Turkey is very close to those oil and gas rich regions but its reserves are not as high as its neighbors. Moreover, the mountainous structure of the Anatolian peninsula brings some difficulty in the process of oil and gas production. In addition, the cost of extracting oil and gas is much more than coal. When all these factors gathered, the low level of oil and gas production in Turkey seems as a natural consequence of several factors.

As it was given in Table 3.1, Turkey's annual oil requirement is about 31 million tons. Turkey's annual production capacity, on the other hand, is limited to 2,2 million tons, which equals to 6,5 percent of the actual oil need. According to TPAO, Turkey's total oil production up to 2008 is 130,7 million tones. Furthermore, the statistics show that there is a sharp decrease in oil production in the last ten years from 2,9 million tons in 1999 to 2,2 million tons in 2008. Furthermore, this level continues for more than 5 years which means that the extraction activities in new fields are not promising although a total of 145 new oil wells drilled in 2008.

[263] Kömür Sektör Raporu, p. 12.

Map 3.2. Oil and Natural Gas Development Fields in Turkey



Source: Republic of Turkey Ministry of Energy and Natural Resources, http://www.enerji.gov.tr

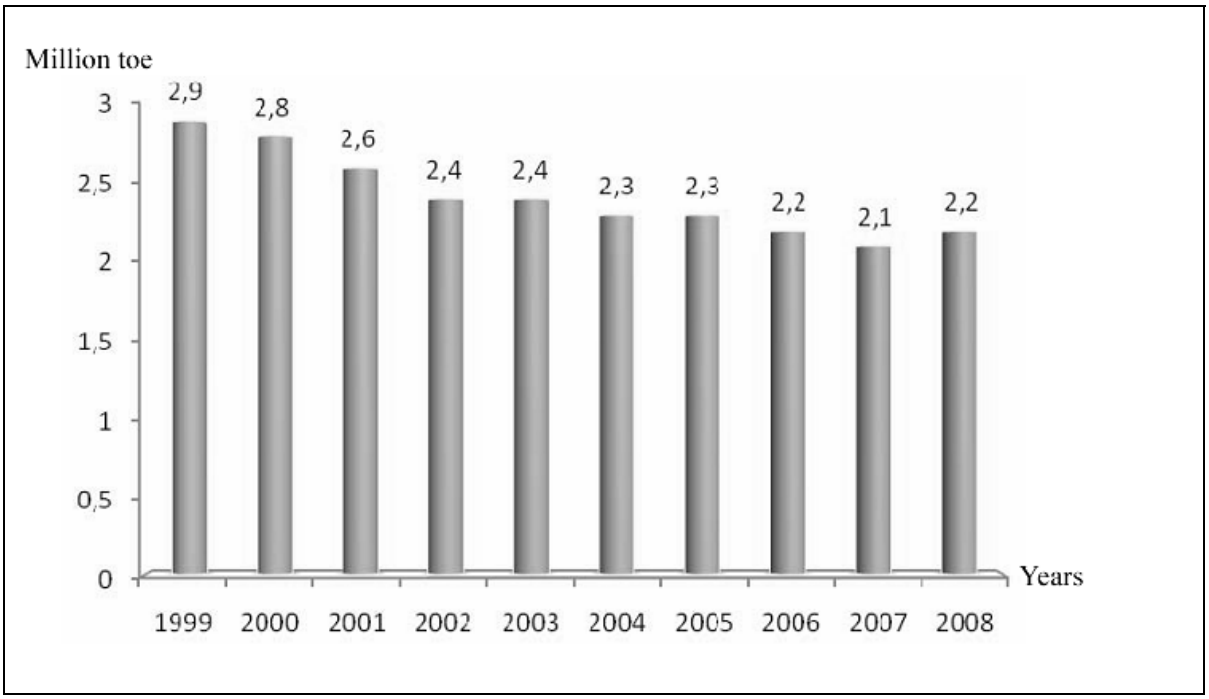
There are two main reasons for the decrease in oil production.[264] Firstly the difficulty in finding new and prosperous oil fields is a big problem. The cost of search is high and production is not guaranteed in all oil search wells. Secondly the aging of existing oil fields is another problem. The capacities of the existing wells are very limited when compared with oil rich regions. Therefore, the period of producing oil from an oil well in Turkey is not so long. In more concrete terms, only 10 percent of the oil fields in Turkey are middle or large scale oil fields. The rest of the fields are small scale. However, different international energy companies have various projects in cooperation with the national oil company TPAO in order to find some new fields in and around Turkey, which includes the off-shore activities on the continental shelf of Turkey.

Natural gas has a shorter history of production in Turkish energy market. The initial natural gas import of Turkey was 15 million m^3 in 1975. Yet, the use of gas in many industries and residential sector as well as Turkish governments' policies in favor of

[264] 2008 Yılı Petrol ve Doğalgaz Sektör Raporu, 2009, *Türkiye Petrolleri Anonim Ortaklığı (TPAO),* Ankara, *p*. 8-9.

natural gas has turned it an indispensable part of the Turkish energy mix. In 2008, the natural gas production of Turkey -for the first time- passed the billion cubic meter mark.

Figure 3.1. Oil Production in Turkey between 1999-2008



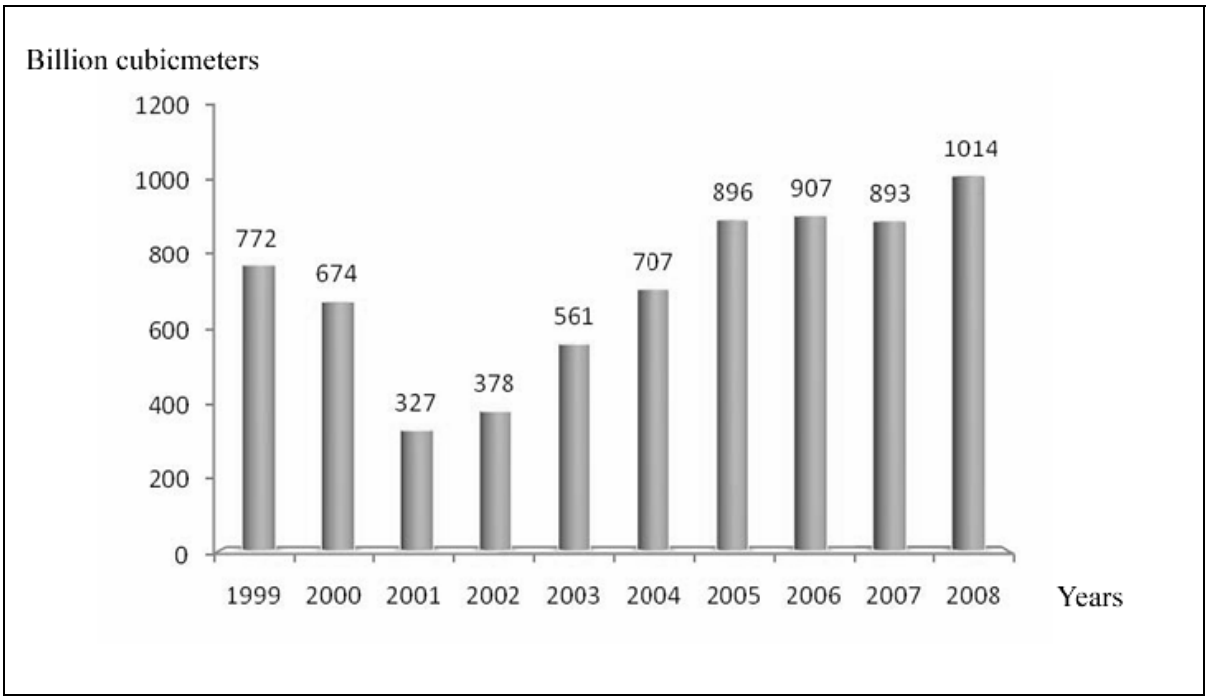
Source: Türkiye Petrolleri Anonim Ortaklığı, *2008 Yılı Petrol ve Doğalgaz Sektör Raporu*

Figure 3.4 depicts the natural gas production in Turkey for the last ten years. Except for a sharp decrease in 2001, the production level has grown steadily. This rapid increase is a consequence of the need for underground storage facilities. Since 1999, there is a high-flow production in the North Marmara and Değirmenköy natural gas fields. These fields have been evacuated in line with the plan for developing new natural gas storage facilities. For this purpose, TPAO and BOTAŞ signed an agreement for storage and reproduction services of the natural gas. As a a total of 1,6 billion m^3 storage capacity will be available in the Marmara Region.[265] Moreover, the recent cooperation between TPAO and Amity Oil for developing new oil and gas fields have also contributed to the increase in Turkish gas production capacity because this cooperation has already achieved to find some efficient new gas fields in Thrace. Despite all the efforts of national and private energy companies, the oil and gas resources of Turkey is limited with the current level of proved reserves.

[265] Ibid.

Unless new technological innovations pave the way for developing new reserves, the current level of Turkey's oil and gas production will probably follow a stable path.

Figure 3.2. Natural Gas Production in Turkey between 1999-2008



Source: Türkiye Petrolleri Anonim Ortaklığı, *2008 Yılı Petrol ve Doğalgaz Sektör Raporu*

Among other energy resources, hydro energy has a considerable contribution to the energy mix. There are 150 hydroelectric power plants (HEPPs) currently operating in different parts of Turkey. The contribution of these HEPPs to the existing energy supply is around 3,8 million toe. In other words, 17 percent of the electricity generated in 2008 is produced by HEPPs.[266] This shows the importance given by Turkey to the hydro energy resources. There are a large number of rivers in Turkey, most of which has a high flow capacity. Therefore, since the mid-1960s numerous dams and associated HEPPs have been constructed in all regions of the country. Among them, Atatürk Dam on the Euphrates River is one of the largest dams of the world. Centerpiece of the more than 20 dams, which all form the multi-sector regional development project of Southeastern Anatolia Project (GAP), Atatürk Dam, has a great contribution to the electricity production in Turkey. However, all these dams and HEPPs built on the rivers of Euphrates and Tigris causes

[266] Hidroelektrik Enerji, 2009, *Devlet Su İşleri Genel Müdürlüğü (DSİ), retrieved* 25 July 2009 from http://www.dsi.gov.tr/hizmet/enerji.htm.

questions over the management of regional watercourse between Turkey and its southern neighbors.

Despite the valuable contribution of HEPPs on Turkey's energy supply, different from other resources, hydro-energy has a disadvantage: Due to the changes in the level of rainfall intensity, the capacity of HEPPs may differ from one year to another. In addition to this, failures, maintenance and repair work and certain policies may decrease the level of energy production by HEPPs.

All other renewable energy resources approximately 7 percent of total energy supply in Turkey. Among those solar energy, wind and geo-thermal are the most efficient types of resources which may contribute to Turkey's energy mix after sufficient quantity of investment is provided. Having a huge potential for solar energy due to its geographical location, Turkey's solar energy potential is calculated as 380 billion kWh/year, which approximately equals to 32 million toe annually. However, unfortunately, Turkey can only use 420 thousand toe of its solar energy potential.267 The utilization of the rest requires a considerable level of investment due to high cost of silicon crystals and thin film technology, which are used in production of solar cells. Technological innovations in solar energy production may suggest lower investment requirements which in turn may allow an increase in the share of solar energy in Turkey's energy mix. Considering the given potential of solar energy in Turkey, even use of only 10 percent of the actual potential would be a great contribution to Turkey's energy question.

Wind power is another renewable type of energy that Turkey has a great potential. Due to its geographic location Turkey is under the influence of different air masses that give rise to potential wind energy generation possibilities in different areas. Especially the Black Sea and Thrace are open the strong winds from the north. Moreover coastal areas of the country have a great wind power potential.[268] According to Professor Uyar from Marmara University "wind power could supply Turkey's energy needs twice over within

[267] Solar Energy, 2009, *Ministry of Energy and Natural Resources,* retrieved 25 June 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=gunes_EN&bn=233&hn=&nm=40717&id=40733.

[268] Durak, Murat and Zekai Şen, *2002,* "Wind Power Potential in Turkey and Akhisar Case Study", *Renewable Energy, 25,* pp. 463-472.

five to ten years if the government had the political will to develop this sector."[269] On the other hand, wind energy atlas of Turkey prepared by the Energy Ministry depicts a total of 53,000 MW of wind power which corresponds to 1.6 million toe of energy resource.[270] Turkey's electricity need is almost ten times higher than this amount. As for the wind energy, Turkey potential is not so clear at the moment. Yet there is a fact that the number of wind farms with huge turbines are rapidly increasing all around the country. As of 2008, the existing contribution of wind power is about 11.1 thousand toe which is not an important level. However, after taking effect of the Renewable Energy Law, licenses were granted to 93 new wind projects which will deliver a total of 3,363 MW equals to 105,000 toe of energy. Another 8,000 MW proposal is awaiting government approval. However, it is not fair to expect a rapid development in wind power generation not only because of the necessary investment, but also geographical impediments such as sudden hills, escarpments and cliffs prevent possible wind generation potential areas.

Turkey has also a great potential of geo-thermal energy resources. Turkey's geo-thermal energy potential is 31,500 MW which equals to one-million toe of energy. Naturally, it is not an impressing figure, but may easily be used in heating, therefore, may cause a decrease in the use of natural gas. However, only 13 percent of the total geo-thermal potential is available at the moment.[271] Another type of energy resource in Turkey is bio-fuels. Various sources from agriculture, forests, animals, organic urban wastes are the bio-mass ingredients of bio-fuels. Currently, Turkey's potential of biomass energy sources are estimated as 8.2 million toe. Approximately, 6 million toe of this amount is already used for traditional heating purposes and in the form of biodiesel. Yet, there is a potential of producing 2.2 million more biomass products. If this potential can be achieved in form of biodiesel, it equals to approximately 13 percent of the total diesel consumed annually in

[269] Daly, John C.K, 2008, "Analysis: Turkey Embraces Wind Power", *Energy Daily*, retrieved 25 July 2009 from http://www.energy-daily.com/reports/Analysis_Turkey_embraces_wind_power_999.html.
[270] Wind, 2009, *Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=ruzgar_EN&bn=231&hn=&nm=40717&id=40734.
[271] Geo-thermal*, 2009, Ministry of Energy and Natural Resources,* retrieved 25 July 2009 from http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=jeotermal_EN&bn=234&hn=&nm=40717&id=40735.

Turkey. However, there are several problems against improving this figure such as lack of sufficient research on this area or non-existence of a law on biomass production.[272]

Besides from these resources, projects for introducing nuclear energy and hydrogen energy into to the Turkish energy market has been discussing for many years. The use of hydrogen energy in public transportation projects are in the agenda of both the government and local authority in Istanbul[273]. The most prominent impediment against projects of hydrogen energy is the cost issue. Although it is completely perfect from an environmentalist perspective, the cost of hydrogen energy is three times higher than traditional hydro-carbon resources. As in all other parts of the world, the proliferation of hydrogen-used facilities in Turkey completely depends on the development of cost-effective hydrogen production techniques.[274] However the situation in nuclear energy is completely different. Although the high costs of construction and operation of nuclear power plants, their use in energy production has always been on the agenda. However, there are serious critiques among different groups. The main concern for the nuclear power is the problem of the disposal of radioactive wastes. Accidents in nuclear site are another risk associated with nuclear power plants. There are certain technological innovations in nuclear energy. However, some former incidents such as Three Mile Island accident in United States and Chernobyl disaster in Soviet Union have still negative effects on people against the nuclear energy.

3.2.2.2. Turkey's Energy Imports

As in most European countries, Turkey is not a self-sufficient country in terms of energy and resource imports of the country almost three-times higher than its own production. Among other resources, oil and its derivatives constitutes the highest share of energy imports. As Table 3.1 depicts, oil is followed by natural gas and coal. The share of gas has increased in the recent years due to the increasing use of natural gas in domestic

[272] Korucu, Yusuf, 2009, *Biyoyatıklar,* retrieved 28 July 2009 from http://www.the-atc.org/events/cleanenergy/pdf/WednesdayBallroom1/Korucu Yusuf_2008CleanEnergy.pdf.
[273]Büyükşehir'den Türkiye'nin ilk 'hidrojen yakıt pili' uygulaması..., 2009, *İstanbul Büyükşehir Belediyesi, retrieved 28 July 2009 from* http://www.ibb.gov.tr/tr-TR/Pages/Haber.aspx?NewsID=17200.
[274] Hydrogen Energy, 2009, *Ministry of Energy and Natural Resources,* retrieved 28 July 2009 from *http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=hidrojenenerjisi_EN&bn=225&hn=&nm=40717&id=40739.*

grid for heating as well as government's policy of increasing supply in order to become an energy hub. On the other hand, the share of imported coal is declining due to the increase in national coal production as a result of proliferation in the number of domestic coal mines.

3.2.2.2.1. Imports of Crude Oil and Petroleum Products

Crude oil and petroleum products constitute almost half of total energy resource imports of Turkey. Moreover, 93 percent of the total necessary oil for Turkey's economy is also imported from foreign sources. In light of these figures, Turkey's oil import policy has gained considerable attention. Turkey's main oil suppliers can be divided into three regional categories: (1) Middle Eastern, (2) North African and (3) Former Soviet Union. Among the first group, Saudi Arabia, Iran, Iraq and Syria are the primary energy suppliers. Libya, Egypt and Algeria supply North African oil to Turkey. Finally, the third group of oil suppliers is formed by the Russian Federation and Azerbaijan. Considering the current investment of Turkish TPAO in Azerbaijan and Kazakhstan, the level of oil imports from these two former Soviet Republics will going to increase in the near future. However, Russia has a dominant role in Turkey's oil market and its share continuously increases. Today, more than 30 percent of imported oil in Turkey comes from Russian Federation.[275] In other words, Russia oil export is around 8-9 billion USD which equals to 35 percent of total foreign trade between Turkey and Russia.[276] Iran, on the other hand, is the main competitor of Russian Federation as an oil supplier of Turkey. Iran retains a huge share in Turkish oil market with its 3.6 billion USD exports to Turkey in 2006.[277] In 2007, Russia, Iran and Saudi Arabia were the top three crude oil suppliers of Turkey with 9.5, 8.8 and 3.2 million tons of oil respectively. The total of these three suppliers is equal to more than 90 percent of Turkey's crude oil imports. In 2008, on the other hand, crude oil imports from Iran have passed the imports from Russia. Turkey has imported 7.9 million tons of crude oil from Iran while imports from Russia decreased to 7 million tons. The share of Saudi

[275] Kanbolat, Hasan, 2009, "Energy to play great role in Turkish-Russian relations", *Today's Zaman,* 6 August 2009.
[276] Rusya Ülke Bülteni, 2008, *DEİK*, pp. 32-33, retrieved 30 June 2009 from http://www.deik.org.tr/Pages/TR/IK_BultenDetay.aspx?bDetId=32&IKID=35.
[277] Türkiye – İran Ticari İlişkileri, 2008, *DEİK*, retrieved 30 June 2009 from http://www.deik.org.tr/Lists/TicariIliskiler/Attachments/75/Ikili%20iliskiler-%20Mart%202008_TR.pdf.

Arabia remained same in this period while Iraqi share increased to 1.65 million tons. On the other hand, Russia has a dominant position in Turkish oil market when other petroleum products are included. In 2007, Turkey imported more than 60 percent of all other petroleum products except for crude oil from Russian Federation. This level declined below 50 percent in 2008. However, it is still clear that Russia is the most important energy supplier of Turkey as far as all types of oil products are considered.[278]

Being heavily dependant on oil imports enforces Turkish governments searching for strategies to diversify oil suppliers. These efforts have two main dimensions. First one is to diversify import source by concluding new supply contracts with different supplier countries. Second one, on the other hand, is a more assertive objective.[279] Turkey's main oil company TPAO has recently developed new oil projects abroad which can be regarded as an important instrument of Turkey's shifting energy policy.

3.2.2.2.2. Imports of Natural Gas and LNG

The import of oil and petroleum products is followed by natural gas. As the Table 3.1 depicts, imported natural gas and LNG constitutes one third of the total energy imports. The share of imported gas, similar to oil imports, is very high. Almost 97 percent of the total gas necessary for Turkish economy is imported from foreign sources. With this figure, it is not difficult to argue that Turkey is completely dependent on energy supply of other countries. Among them, as in the case of oil, Russian Federation is well ahead of all other gas suppliers of Turkey. Table 3.2 shows Turkey's natural gas and LNG imports for the last decade with respect to sources of import. Russian share in Turkish gas market is higher than total of all other suppliers. The share of Russian gas in Turkish market has grown steadily and has reached almost equal to two third of total natural gas import of Turkey. Russian Federation is followed by Iran with an annual supply capacity of around 6 bcm. Despite the energy crisis in late 2008, the level of natural gas provided by Iran has steadily increased since 2001. The Iran-Turkey pipeline is expected to operate with a full-capacity in the following years, which is 10 bcm per year. Moreover, bilateral talks

[278] The information about 2007 and 2008 oil imports are provided due to special request by Turkish Statistical Institute (TÜİK). See Annex for the detailed oil imports of Turkey for 2007-2008.
[279] Altınay, Galip, 2007, "Short-run and Long-run elasticies of import demand for crude oil in Turkey", *Energy Policy,* Vol. 35, pp. 5829-5835.

between the governments of the two neighboring countries may result in a further cooperation in energy trade. In the early years of gas consumption, Turkey's one of the main suppliers was Algeria. Algerian supply is different in form and together with Nigeria, they are the LNG suppliers of Turkey. Since LNG requires a regasification process, Turkey has a limited LNG import capacity. Therefore, Algeria's share in Turkish gas market has improved as other suppliers using pipelines. In ten years period, the increase in Algeria's exports to Turkey could only increased by one-third. Nigeria's exports to Turkey have also depicted a similar pattern to Algeria. Since 2001, Nigeria provides around 1 bcm of LNG annually. From this point of view, buying LNG from Nigeria instead of increasing the Algerian share is mainly for the purpose of diversification of LNG sources.

Table 3.2. Natural Gas Imports of Turkey between 1999-2008*

Years / Supplier	Russian Federation	Iran	Azerbaijan	Algeria	Nigeria	Total
1999	8.68	-	-	2.96	0.06	11.70
2000	10.08	-	-	3.59	0.7	14.37
2001	10.92	0.14	-	3.62	1.19	15.87
2002	11.57	0.66	-	3.72	1.13	17.08
2003	12.45	3.46	-	3.59	1.10	20.06
2004	14.10	3.49	-	3.18	1.01	21.78
2005	17.52	4.24	-	3.81	1.01	26.58
2006	19.31	5.59	-	4.21	1.09	30.02
2007	22.75	6.05	1.25	4.20	1.39	35.64
2008	22.96	4.11	4.57	4.14	1.01	36.79

* in billion m^3

Source: BOTAŞ, 2008 Yılı Sektör Raporu.

As the Table 3.3 shows, the Nigerian alternative gas agreement was concluded in 1995. This shows that Turkey has been aware of the necessity of diversification since the mid-1990s. Last but not least, a new pipeline between Baku and Erzurum has been commissioned in 2006. The current capacity of the pipeline is 6.6 bcm annually yet due to certain problems Azerbaijan could not send Turkey more than 4.5 bcm of natural gas. However, with the Shah Deniz gas reserves, Azerbaijan seems to be the second best natural gas supplier of Turkey in the following years. However, as shown in Table 3.3., period of gas purchase agreement with Azerbaijan is comparably shorter than other suppliers.

However, a new agreement between Turkey and Azerbaijan would be concluded if Nabucco project is constructed. These are the current gas suppliers.

Table 3.3. Turkey's Natural Gas Supply Agreements

	Quantity (billion m³/year)	Date of Agreement	Period (Year)	Current situation
Russian Federation (West)	6	14.02.1986	25	Active
Algeria (LNG)	4	14.04.1988	20	Active
Nigeria (LNG)	1.2	09.11.1995	22	Active
Iran	10	08.08.1996	25	Active
Russian Fed. (Black Sea)	16	15.12.1997	25	Active
Russian Federation (West)	8	18.02.1998	23	Active
Turkmenistan	16	21.05.1999	30	Inactive
Azerbaijan	6.6	12.03.2001	15	Active

Source: http://www.botas.gov.tr/index.asp

Another supply agreement has been signed between Turkey and Turkmenistan and approved by the Turkish Grand National Assembly in 1999.[280] However, because of problems of Caspian Sea delimitation between the littoral states and the questions over trans-Caspian pipeline, the delivery of Turkmen gas into Turkish gas grid has not been achieved yet. The gas agreement with Turkmenistan, on the other hand, can be viewed as an imperative element of Turkey's strategic role in energy transportation. Since the problems with Iran could not be solved promptly, Turkmen gas would be the necessary source of energy to transfer to Europe by Nabucco or any other future pipeline.

3.2.2.2.3. Imports of Coal

There is an increasing tendency in use of natural gas in Turkish energy market, yet coal has still a considerable share as a conventional source of energy. Furthermore, the use of coal depicts an upwards tendency as well. However, as explained above, most of the Turkey's coal reserves are composed of lignite which provides less calorific value when compared to hard coal. In that sense, particularly some industries, i.e. iron and steel

[280] TBMM, 1999, *Türkiye Cumhuriyeti ve Türkmenistan Arasındaki Hazar-Geçişli Türkmenistan-Türkiye-Avrupa Gaz Boru Hattı Projesinin (Hgb) İfası ve Türkmenistan'dan Türkiye Cumhuriyetine Doğal Gaz Satışına İlişkin Anlaşmanın Onaylanmasının Uygun Bulunduğu Hakkında Kanun,* Kanun no: 4466, 3.11.1999.

industry or cement production, require high quality coal and imports coal from international market. According to General Directorate of Turkish Coal (TKİ) 60 percent of 17.4 million tons of imported coal is used by industrial sectors in 2006.[281] Most of the imported coal, as in the cases of oil and natural gas, is imported from Russian Federation. In 2007, a total 22.9 million tons of coal is imported from other countries. Russian Federation leaded with a share of almost 42 percent. Colombia and South Africa, following Russian Federation, could only provide 2.5 million tons of coal each which is equal to 11 percent of total imports. Other main supply sources for coal are Australia, China, US, Canada and Ukraine. The total coal imports decreased to 19.5 million tons in 2008 opposite to the general trend in the last decade. The economic stagnation of Turkish economy is the main reason of that decline. The dominant position of Russia continued in 2008 with the same share of the previous year. Colombia is the second and Australia is the third main coal suppliers of Turkey. South Africa, US and China are other main suppliers.[282]

3.3. Energy Policy of Turkey

3.3.1. A General Overview

As the given information about Turkey's energy resources, it is obvious that Turkey is heavily dependent on external energy resources. Therefore, developing a particular energy policy to secure sufficient resources is should be evaluated as an unavoidable objective of Turkish government. Being aware of this fact, Turkish government has become more active in energy issues. Particularly, Turkey's activities are concentrated on regional basis, which surrounds the country's bordering energy rich neighborhood as well as Central Asian countries. As for the neighborhood, Turkey is in a process of developing intensive relations with Iran and Iraq. In addition, Turkey has also engaged in certain projects in Turkmenistan and Kazakhstan. Turkey's newly developed active approach may also be found in the words of Turkey's Energy Minister's introduction to the Annual Energy Report issued by the Ministry of Energy and Natural Resources. Mr. Taner Yıldız declared that energy issues requires a multi-dimensional approach which is composed of national,

[281] Kömür Sektör Raporu, p. 14.
[282] The information about 2007 and 2008 coal imports are provided due to special request by Turkish Statistical Institute (TÜİK). See Annex for the detailed coal imports of Turkey for the previous two years.

international, foreign policy and energy diplomacy considerations. The Minister also confirmed Turkey's strategic aim of becoming an 'energy corridor' between the Western countries demanding energy and Eastern countries providing resources.[283] The ministry defines Turkey's main energy policies and priorities as follows:[284]

- Diversifying resources and countries,
- Giving priority to utilization and development of domestic and renewable resources;
- Making ideal use of our country's natural resources potential;
- Developing and implementing effective programs in line with our energy efficiency strategy;
- Improving technical and scientific infrastructure in the field of nuclear energy;
- Increasing our strategic petroleum and natural gas storage capacity;
- Making best use of our country's potential for becoming an energy trade hub;
- Increasing fuel flexibility (allowing for the use of alternative energy resources in production);
- Participating at all stages to the process of transmitting Middle Eastern and Caspian petroleum and natural gas to markets;
- Structuring energy sector as a well-oiled market based on transparency and competition,
- Participating in and ensuring integration with regional cooperation

The list of priorities shows that the primary target of Turkey's energy strategy is the question of diversification. As it is the same in all its EU members, Turkey is currently faced to an ambiguous energy supply phenomenon. There is an increasing consumption trend as a result of economic development. However, there are many candidate buyers for potential resources around Turkey. Therefore, Turkey has to develop new policies not only for cooperating with energy demanding European countries, but also for creating interest on the suppliers' side. Constructing huge energy transportation projects require high amount of capital. Turkey's energy market is not as huge as European market and solely Turkey's energy consumption would not be sufficient to invest on those projects. Without European or American support, Turkey would hardly find investor for huge pipeline

[283] 2008 Faaliyet Raporu, 2009, *ETKB Strateji Geliştirme Başkanlığı,* Ankara: Enerji ve Tabii Kaynaklar Bakanlığı, pp.5-6.
[284] *Ibid.*, p. 45.

projects. Moreover, suppliers would no be willing to supply Turkey's pipeline without the European market. Therefore, the European energy demand which would cross over Turkey may convince the suppliers as well. From this perspective, it is clear that Turkey needs the huge demand figures of European countries in order to obtain its primary energy policy: diversification. Besides diversification, the second priority in Turkey's energy policy is defined as utilizing domestic resources, which includes renewable resources. Similar to many European countries, Turkey tries to adapt itself to the technological innovations. The growing number of wind turbines is the most prominent example of this. However, as mentioned above, the contribution of renewable resources are far from covering Turkey's energy demand. Their role may only help to diminish the import dependency at a certain level. Similarly, level of Turkey's domestic reserves is also a controversial issue. According to some, there are high oil and gas potentials in Turkey. There are some signals of a potential.[285] However, even if there is a high potential, it will require time and investment. Therefore, Turkey should better follow policies based on close relations with suppliers. Being aware of this fact, the policy makers of ETKB noted 'the potential of becoming an energy trade hub' and stressed the importance of 'regional cooperation' as well. Finally, another crucial point for Turkey has also been considered by the energy bureaucracy of Turkey. They believe that Turkey should develop its own nuclear energy capacity, which would contribute to Turkey's total energy supply. Energy ministry called out its fourth tender for building and operating a nuclear plant in 2008. Only one of the applicants, the consortium of Russian companies Atomstroiexport and Inter Rao and Turkey's Park were in conformity with the tender conditions.[286] However, the tender was cancelled by electric distribution company TETAŞ, who is responsible for the tender in the name of energy ministry.[287] However, the government and energy bureaucracy is determined to build a reactor and will call out a new tender. The nuclear power, therefore, is perceived as an important way of providing diversification for Turkey's energy dependency problem.

[285] TPAO has many different exploration, development and production fields ranging from Black Sea to Thrace and South East Anatolia.
[286] Nükleer Santral İhalesine Tek Başvuru, 2008, *CNN.com,* 25 September 2008, retrieved 30 July 2009 from http://www.cnnturk.com/2008/ekonomi/genel/09/24/nukleer.santral.ihalesine.tek.basvuru/494280.0/index.html.
[287] Nükleer santral ihalesi yine iptal, 2009, *Radikal,* 20 November 2009.

Turkey perceives the energy issues as a part of its foreign policy as well. In 2009, Ministry of Foreign affairs issued 'Turkey's Energy Policy', which explains Turkey's priorities in energy issues as a part of its foreign policy.[288] Parallel to the energy policy defined by the energy bureaucracy of Turkey, foreign policy makers are motivated by the uniqueness of Turkey's transit role in energy politics. Furthermore, from a foreign policy perspective, they believe that "The pipeline projects linking the Caucasus and Central Asia to Europe will be essential for the region's integration with the West. Secure and commercially profitable pipelines will help bring stability and prosperity to the region."[289] For providing stability and peace to the region, therefore, Turkey's strategic assets such as BTC or South Caucasus Pipeline are vitally important steps.

In order to fully comprehend Turkey's energy position, it may be helpful to have a detailed analysis of some of the above mentioned issues. Turkey's production was evaluated in detail before. Here, an analysis of currently functioning energy projects as well as an evaluation of debates on nuclear question may help to make some conclusions in the final chapter of this study.

3.3.2. Turkey's Tangible Assets

Turkey's increasingly aggressive energy policy overtly searches for becoming a centre of energy sources which will play the role of resource distributor. However, envisaging policy prospects or making strong declarations are not sufficient to achieve that goal. The Turkish policy makers have long been conscious of this fact and started to forge ahead since late 1990s. For instance, they engaged a tough fight to construct the famous Baku-Tbilisi-Ceyhan (BTC) Pipeline Project, which has strengthened Turkey's position in energy politics. Similarly, the other pipelines are vitally important for improving Turkey's role as an energy hub. These are Turkey's tangible assets and should be assessed for a prompt evaluation of Turkey's contribution to European energy security.

[288] Türkiye'nin Enerji Politikası, 2009, *Ministry of Foreign Affairs*, retrieved from http://www.mfa.gov.tr/turkiye_nin-enerji-politikasi.tr.mfa.
[289] *Ibid.,* p. 2.

3.3.2.1. Baku-Tbilisi-Ceyhan Crude Oil Pipeline

It is not an exaggeration to say that BTC project is the most prominent success of Turkey in recent Turkish political history. The success of this project was not only a victory over other possible routes for transporting Azeri oil to world markets, but also means a great contribution for Turkish economy. However, presenting some technical data about the project may be helpful before mentioning the potential benefits and significance of the BTC Pipeline in more detail. The BTC project was designed for constructing a safe and secure transportation system for Caspian Crude oil. Therefore, as it is shown in the map below, the route of the pipeline is somehow longer than alternatives. The BTC project starts at Azeri-Chirag-Guneshli oil fields in the Azerbaijani shores of Caspian Sea and arrives in Turkey at Posof passing through Georgia. Within the territory of Turkey, the pipeline passes through Erzurum and Sivas, from there reaches to the terminal in the Port of Ceyhan in Mediterranean Sea [290]. The entire length of the pipeline is 1,768 meters with an annual capacity of 50 million tons of oil. However, the BTC Project Director Mr. Osman Göksel declared that the pipeline capability may be increased 50 percent which equals to 75 million tons of crude oil. The expansion of pipeline capacity to this amount requires investment for increasing the number of pumping stations.[291] The estimated period for operation is 40 years; however, it may be extended depending on several factors: These factors are: (1) the will of parties on further cooperation, (2) implementing technical improvements and necessary maintenance of the pipeline, and finally (3) having sufficient resources to pump into the pipeline.

BTC is the second longest oil pipeline after the 4,000 km Druzhba Pipeline cross passing Russia. The pipeline lays 443, 249 and 1076 km long in Azerbaijan, Georgia and Turkey, respectively. There would be shorter ways to transport Azeri oil to international market. The main reason for selecting this longer route is somehow political. First of all, a shorter route would be transfer to the Persian Gulf via passing through Iranian territory. SOCAR, Azeri state oil company, ships oil across the Caspian Sea to the Iranian port of Neka, and then Iran exports an equivalent volume out of its Middle East Gulf facilities.

[290] For more technical data about the BTC project, see: www.btc.com.tr.
[291] This information is expressed in a speech by Mr. Osman Göksel in a special meeting in Ankara on 30 September 2009.

During the construction of BTC Iran suggested that this mechanism be used for most of Azerbaijan's oil. However, Azerbaijani government rejected the Iranian proposal.[292] Moreover, the American veto over any kind of route passing through Iran disappointed shorter alternative routes even passing 40 meters inside the Iranian borders, which would shorten the construction of pipeline. Even though there is no direct role in the project, US position was vitally important because of several reasons. Firstly, US companies have taken part within the construction consortium and took part in the operating company as well. In addition, as a global oil buyer, the US has a considerable impact over energy producers and also has direct impact over capital providers. Another interest in the region for US is the fact that American firms hold substantial shares of almost every major Caspian consortium agreement.[293] Therefore, it was clear that without approval by the system's hegemon, it was more than difficult to start BTC. After eliminating routes passing through Iran, another shortcut would be a transit pass via Armenia for the sake of technical and economic simplicity. However, the long-standing dispute over Nagorno-Karabakh between Armenia and Azerbaijan naturally inhibited any proposal that may shorten the length of BTC. Because of these reasons, BTC has become the second longest oil pipeline of the world.

Alternatives for BTC project were not limited to projects passing Armenian or Iranian territory. As the political and dominant energy actor of the region, Russia proposed a project as well as oil companies alternative route as shown in Table 3.1: (1) Baku-Supsa Oil Pipeline, (2) Baku-Novorossiysk Oil Pipeline. These pipelines were suggested by Russia as alternatives to Turkey's BTC project. The former one is also known as 'Western Early Oil Pipeline'. In mid-1990s, the ambiguous situation about the BTC project's possibility and the efforts to market the Azeri oil to international market resulted in Baku-Supsa pipeline project. Running 833 km from Sangachal in Baku to Supsa port in the Black Sea coast of Georgia, this pipeline could only transfer 7.2 million tons of oil annually. The pipeline was planned, constructed and operated by BP in cooperation with Azeri national oil company SOCAR and Azerbaijani International Operating Company.

[292] Azerbaijan economy: Suffering for Georgia, 2008, *EIU ViewsWire,* retrieved 11 December 2008 from http://proquest.umi.com/pqdlink?Ver=1&Exp=12-10-2014&FMT=7&DID=1566694381&RQT=309.
[293] Bremmer, Ian, 1998, "Oil Politics: America and the Riches of the Caspian Basin", *World Policy Journal, Vol. 15, No.1,* p. 28.

Map 3.3 Map of BTC and Alternative Pipelines

Source: http://www.globalsecurity.org/military/world/azerbaijan/images/azerbaijan-map-pipes-1.gif.

The main reason for building this line was Azerbaijan's desire to export their oil as early as possible and to have alternative routes for exporting Azeri oil. For this purpose, Azerbaijani President Aliyev and Georgian President Shevardnadze agreed on pipeline on March 1996 and the construction completed in 1998. The first Azeri oil started to be transported by the Baku-Supsa pipeline on April 17, 1999.[294] However, the pipeline had faced to severe difficulties in operation and BP has suspended the use of Supsa line for several times. In October 2006, pipeline was closed by the operator for 10 days of maintenance but then BP declared a delay in reopening due to some 'anomalies'.[295] In August 2008, Georgian government blamed Russian government for an assault on Baku-

[294] Transport Routes for Azeribaijani Oil, *Heydar Aliyev Foundation*, retrieved 5 May 2008 from http://www.azerbaijan.az/_Economy/_OilStrategy/oilStrategy_05_e.html.
[295]Reopening Baku-Supsa pipeline not high prioritiy-BP, 2007, *Reuters UK*, retrieved 16 April 2008 from http://uk.reuters.com/article/idUK163532820070416.

Supsa pipeline.[296] BP suspended the operation of Baku-Supsa as a precautionary measure, yet they did not declared any impact on pipeline infrastructure after the alleged Russian air attack on Georgian territory.[297] Currently the pipeline is functioning but with a very low volume of its original capacity. Due to above mentioned problems; the pipeline could only pump 400 thousand tons of oil during the whole 2008. In the first half of 2009, this amount reached to 1.7 million tons yet still far from its actual capacity.[298] Since the delivery from this pipeline is much less than BTC and both pipelines are operated by the same company, BP, Baku-Supsa became a secondary line which may contribute in case of any disruption on BTC line.

The Russian alternative, on the other hand, was a longer pipeline starting from the same terminal in Baku and ended in Novorossiysk port in Russian territory. The pipeline is a demonstration of Russia's eagerness to continue its domination over the transfer of Caspian oil into the world energy markets. Moreover, by building a pipeline to Novorossiysk, Russia would be relived from paying high transit fees to Ukraine for transferring Siberian oil to the port in Bleak Sea.[299] Against Turkish proposal for BTC pipeline and Georgian proposal of Baku-Supsa pipeline, Baku Novorossiysk was concluded in a shorter period of time and started to pump Azeri oil in October 1997. It is longer than Baku-Supsa with a length of 1,330 km passing through Dagestan and Chechnya and its annual capacity is equal to 5 million tons.[300] The pipeline is operated by SOCAR within the Azeri borders and by Transneft[301] within the Russian territory. During late 1990s, the bilateral relations of Russia and Azerbaijan fostered the Novorossiysk line. The only problem for the pipeline was the dispute of transit fees between Russia and

[296]Attack on Baku-Supsa Pipeline, 2008, *Georgia Update,* retrieved 7 November 2008 from http://georgiaupdate.gov.ge/en/doc/10006883/Microsoft%20Word%20-%207%20Baku-Supsa%2007%2011% 2008.pdf.
[297] Upstream, 2008, "BP shuts in Georgia links", retrieved 12 August 2008 from: http://www.upstreamonline.com/live/article16 0951.ece.
[298]Baku-Supsa Pipeline Volume Increases", 2009, *The Messenger Online,* retrieved 17 August 2009 from: http://messenger.com.ge/ issues/1920_august_17_2009/1920_econ_four.html.
[299] Russia considers new pipe plan, 1998, *Hart's Daily Petroleum Monitor,* p. 1, retrieved 20 September 2008 from: http://proquest.umi.com/pqdlink?Ver=1&Exp=12-10-2014&FMT=7&DID=33974154&RQT=309.
[300] Country Analysis Briefs: Azerbaijan, November 2008, retrieved 17 August 2009 from http://www.eia.doe.gov/cabs/Azerbaijan/pdf.pdf.
[301] Transneft is Russian state owned pipeline operator, which controls a total pipeline network lenght of almost 50,000 km througout the Russia.

Government of Chechnya until mid-2000s.[302] However, the introduction of BTC as a new way of Azeri crude oil to the world markets has changed the situation. The majority of Azeri oil is transferred from BTC since the first pumping in May 2005. This, in turn, provided Azerbaijan leverage in its relations with Russia. In late 2007, Russia has tended to renew its gas agreement with Azerbaijan and demanded a price increase from 110 to 230 USD. In response to Russian step, Azeri government decided to halt oil pumping to Baku-Novorossiysk pipeline.[303] This situation did not last long and because of production growth in the Azeri-Chirag-Guneshli oil fields as well as increasing throughput from Kazakhstan, the current capacity of BTC has already been used by February 2009. The decline in the level of oil transport from Novorossiysk pipeline has turned into an increasing trend due to Azeri government's decision. SOCAR declared in April 2009 that they plan to double oil exports via Novorossiysk by that year.[304] In short, the other two pipelines opening Azeri oil fields in Baku to world oil markets can only transport a total of 12.2 million tons annually. This level is less than BTC's current capacity which is equal to 50 million tons of crude oil. In addition to this, introduction of new pumping stations may increase this level to 75 million annually. Therefore, the other options for Azeri oil are far from competing with BTC since any possible route over Iran is neglected.

The operating company of BTC is different from the ownership. The responsible operator for the Turkish section of the BTC is BOTAŞ International Limited (BIL). The BP Azerbaijan is responsible for the operations outside the Turkish territory. However, the ownership is different. BP Azerbaijan and BIL are charged by the owners in order to operate the pipeline. To clarify the ownership and partners of the pipeline is also important since it may show the strength of BTC against any kind of external threats. As the Table 3.4 shows the bigger partners of the project are BP and SOCAR. Total of US companies in the project is slightly above 10 percent. After long disputes over the shares, Turkey could guarantee only a small share from the project. Norway, Italy, France, Japan and with a very tiny share Saudi Arabia are the other shareholders of the project. This structure may

[302] Clover, Charles and Corzine, Robert, 1997, "Pressure for new Caspian Oil Route" *Financial Times,* p.5, 3 September 1997.
[303] Hacıoğlu, Nerdun, 2007, "Kriz Boğazlara Yaradı", *HurriyetUSA,* 1 Eylül 2007, retrieved 22 September 2008 from http://www.hurriyetusa.com/haber/haber_detay.asp?id=10530.
[304] Azerbaijan Oil, 2009, *US Energy Information Administartion (EIA)*, retrieved 18 September 2009, from http://www.eia.doe.gov/cabs/Azerbaijan/Oil.html.

suggest that the ownership structure of the project is quite strong. Both partner oil companies and their respective countries of origin have significant interest on the project. From this point of view, it is clear that their struggle for constructing this pipeline will also prevail throughout the functioning of the project for at least 40 years. It is also interesting that German energy companies did not take part in this configuration. Germany abstention

Table 3.4 Ownership Structure in Baku-Tbilisi-Ceyhan Pipeline

Company	Share (in percent)	Country of origin
BP Exploration Ltd.	30.10	United Kingdom
SOCAR	25.00	Azerbaijani
Chevron	8.90	United States
Statoil	8.71	Norway
TPAO	6.53	Turkey
ENI	5.00	Italy
Total	5.00	France
Itochu Inc.	3.40	Japan
Inpex	2.50	Japan
ConocoPhillips	2.50	United States
Delta-Hess Ltd.	2.36	Saudi Arabia / United States

Source: BTC Website: www.btc.com.tr

may be attributed to the fact that Germany has developed clear and friendly relationship with Russia as far as energy supply is considered. Any German country taking part in BTC would probably not be welcome in Russia. However, it is something different from German interest on diversification. Germany's and Austria's interests in Iranian energy fields and their eagerness to develop relations with Iran is a clear example of Germany's efforts to diversify energy supply, which will be evaluated in the final chapter of this study.

In light of the given historical development of the project, BTC pipeline completed in 2006. As a result of a great effort performed primarily by Turkey, the BTC pipeline project has overcome many controversial issues such as its length of more than 1700 km, its direction, its enormous cost totaled almost to 3 billion USD, natural difficulties in construction and problems in land-acquisition process. All these problems were eliminated one by one and the first Azeri crude oil was loaded to tankers in Ceyhan Terminal on June 2. As of 23 September 2009, 723 million barrels of crude oil is loaded into 911 tankers, which is equal to approximately 100 million tons of oil. It brought many advantages to its

beneficiaries. Initially Azerbaijan, as the producer country, has certain benefits. First of all, Azeri government does not need to negotiate with Russia any more for its oil exports. Moreover, they have a bargaining power for some other political issues as in the case of natural gas prices. Secondly, with the 42 inch diameter of BTC pipeline, they have a great potential for export. There capacity of oil produced in the Caspian fields of Azerbaijan has been growing since the opening of the BTC. Today, the BTC pipeline has already been functioning with its full capacity. This level of oil export provides enormous economic benefits to Azerbaijan. Finally, Turkey's political and economic stability provides security for Azerbaijan to export its oil without a serious disruption when compared with Iran. Iran's continuing problems with international community particularly over the nuclear issue could pose disruptions in oil transport if Azerbaijani government had preferred any kind of Iranian alternative. Second beneficiary of the BTC is a group of oil importers and commercial companies operating in Azeri oil fields. BTC pipeline provides various factors of supply security for the transportation of Azeri oil. For example, the political stability of Turkey is an important element of supply security. Despite the political problems in Georgian part of the pipeline, stability in Turkey provides a great comfort for this group, which is mainly consist of Western countries and their affiliated oil companies. Finally, Turkey is the third beneficiary of the project.

The first positive impact of the project on Turkey is economic. It provides transit fees in terms of transit tax and business services. BTC coordinating company expects an annual income of 140-200 million USD for the first 16 years, then 200-300 million for the rest of the project.[305] Moreover, the construction of the pipeline brought Turkey some advantages in terms of employment, material and equipment. Most of the labor force and material used in construction process is provided by Turkish companies.[306] In that sense, only the construction process of the project provided more than 22,000 workforce for the Turkish economy. Another economic benefit of the project for Turkey is the profit of TPAO as a

[305] BTC Projesi, 2009, *Bakü-Tiflis-Ceyhan HPBH Proje Direktörlüğü, retrieved* 18 September 2009 from *http://www.btc.com.tr/proje.html.*

[306] The pipes and other material used in construction were mostly manufactured in Turkey for the Turkish section. Various sections of the pipeline inside Turkey's borders were constructed by some famous Turkish contractors such as Tepe, Limak or Alarko. The new marine terminal in Ceyhan was also built by a Turkish company: Tefken. For more information, see: BTC Section – Construction Begins, 2003, *Azerbaijan International,* Vol. 11, No.2, pp. 78-81.

shareholder of the company operating the oil-fields and transportation of Azeri oil. Last but not least, many individual land owners who have fields throughout the pipeline route have gained revenues from the process of land acquisition.

The project has some social and environmental benefits for Turkey as well. During the construction process, more than 350 archaeological sites have been identified. A program for educating local people on traffic safety and security has been developed by the operating company because of the intensive heavy-duty truck traffic in the construction area. In addition to these social affects, the project has brought some positive environmental consequences as well. One of the most prominent of them is the forestation. More than 60 thousand trees planted throughout the BTC pipeline. However, the most impressive impact is about the Bosporus. If alternative routes to BTC ending in Black Sea ports were implemented, the tanker traffic on the Bosporus would be very intensive. Then, the possibility and risk of an accident on the Bosporus would be much higher than today. The environmental affect of a gigantic tanker wreck would be catastrophic. Therefore, the main environmental benefit of BTC for Turkey is its contribution to lessen the tanker traffic on the Turkish straits.

Finally, Turkey has clear political benefits from the implementation of BTC project. By providing the support of many European and American companies, Turkey has confirmed its potential role as an energy hub between the suppliers of the East and buyers of the West. Secondly, Turkey could achieve to become an active player of the energy game played in Caspian region. Having a share higher than Total and ENI, Turkey's TPAO has become more active in the region. Turkish petroleum company's further activities continue in Kazakhstan as well.

To sum up, all these benefits reaffirm that BTC pipeline is one of the most significant achievements of the recent Turkish political history. Caspian resources are very important for all international actors from Europe to China. However, the transportation of the resources is also an important question. Iran stands to benefit from transporting the Caspian oil, and so has a strong interest in improving relations with the regional energy-producers. Russia, on the other hand, insists on perceiving the Caspian Basin as its backyard and is not happy with the current developments. From that point of view, BTC

project has reinforced Turkey's determination to play a more assertive role in energy politics and somehow supported the further projects such as Nabucco.

3.3.2.2. Iraq-Turkey Crude Oil Pipeline

Iraq-Turkey Pipeline is the first project that introduced Turkey to the energy politics as an transit country. There are two parallel pipelines built from Kirkuk in Northern Iraq to the terminal at the port of Yumurtalık in Ceyhan, Adana. The first one was commissioned in 1976 and started operation in May 1977. The initial capacity of this first pipeline was 35 million tones annually. This capacity was increased to 46.5 million tones after the expansion project was finished in 1984. However, the route through Turkey is the best route since any other routes over Israel or Syria attach high risks. Therefore, in a couple of years a second line was built parallel to the initial pipeline. When the second line completed in 1987, the total capacity has reached to 70.9 million tones per year, which is quite higher than the current level of BTC. The lengths of the pipelines are also shorter than BTC. The first line is 968 km of which 641 km lies inside Turkey and 345 km lies in Iraqi territory. The Iraqi section of the second line is shorter with a length of 234 km. The Turkish section, on the other hand, is longer than the first pipeline, with a length of 656 km. In aggregate, because both lines are shorter than BTC, the amount transferred per year is higher than BTC. [307]

However, oil pumping to the pipelines have been suspended for many times since the Gulf War in 1990. Four days after Iraq's invasion of Kuwait, UN issued a resolution. [308] According to the UN sanctions, all trade and financial resources with certain medical and foodstuff exceptions were banned. In line with UN sanctions, Turkey stopped the oil transportation through Kirkuk-Yumurtalik pipeline on August 1990. After the end of the Gulf War in early 1991, the sanctions continued as a result of another UN decision[309]. UN Resolution 687 reiterated the sanctions imposed by the previous resolution and required the destruction of all kinds of chemical, nuclear and biological weapons as well as long range

[307] Iraq-Turkey Crude Oil Pipeline, 2008, *BOTAŞ*, retrieved 21 December 2008, from: www.botas.gov.tr
[308] United Nations, 1990, Resolution 661 (S/RES/0661) adopted by the Security Council at its 2933rd meeting on 6 August 1990.
[309] United Nations, 1991, Resolution 687 (S/RES/0687) adopted by the Security Council at its 2981st meeting on 3 April 1991.

missiles. Limited oil exports have been allowed in 1996 after the agreement between UN and Iraqi government. As a result of the negative reactions of the Saddam Hussein government to the UN decisions and lack of necessary cooperation by the former Iraqi officials to UN inspectors, the sanctions persisted until May 2003 and could only be fully lifted after the fall of Saddam Hussein.

Some other problems, however, have not permitted the pipeline to operate promptly with a full-capacity. The first problem of the pipeline is about instability in Northern Iraq. After the US led invasion of Iraq in 2003, the pipeline has become a principal target for sabotage.[310] Several bomb attacks to the pipeline continued until 2007. Oil flows have increased to almost a quarter of Iraq's oil exports to world markets since then, yet there are still some pauses in pumping of oil due to similar sabotage at the local level.[311] In addition to the assaults on pipeline, stealing oil from the pipeline is another problem which causes disruptions on oil flow. Moreover, staying out of use for a very long time has caused some technical problems in Kirkuk-Yumurtalik Pipeline. However, it is clear that despite all of the mentioned deficiencies, this line is one of the most important export ways of Iraqi oil. There are some alternative plans to Iraq-Turkey pipeline, yet Turkey is still the most reliable partner for transporting Northern Iraqi oil. The idea is reinforced when the Deputy Oil Minister of the new Iraqi government declared the plans over a new line which bypasses attack-prone areas in Northern Iraq. That new plan for the route of Iraqi oil envisages Ceyhan as a destination as well.[312]

3.3.2.3. Blue Stream Natural Gas Pipeline

One of the most important assets of Turkey in energy politics is the Blue Stream Pipeline. There were many questions about the benefits of the pipeline during the construction period as well as allegations for corruption.[313] However, when the pipeline

[310] Explosion at the fuel pipeline west of Baghdad, 2003, *USA Today,* retrieved 23 December 2008, from http://www.usatoday.com/news/world/iraq/2003-06-22-iraq-oil_x.htm.
[311] Iraq-Turkey oil pipeline halts pumping, 2009, *ReutersUK,* 24 November 2009, retrieved 5 December 2009 from: http://uk.reuters.com/article/idUKGEE5AN12J20091124.
[312] Iraq considering new Kirkuk-Ceyhan line, 2007, *United Press International,* 26 September 2007, retrieved 5 December 2009, from http://www.upi.com/Science_News/Resource-Wars/2007/09/26/Iraq-considering-new-Kirkuk-Ceyhan-line/UPI-40771190832213/.
[313] Former Energy Ministers Mr. Cumhur Ersümer and Mr. Zeki Çakan were accused of –under the then Prime Minister Mesut Yilmaz's direction- hiding the full context of the agreement and causing losses to the

completed in 2005, many of those concerns disappeared. Before evaluating the political implications of Blue Stream pipeline, some informative data may help to understand the significance of the project and its contribution to Turkey's energy policy.

The Blue Steam project is a 1,213 km pipeline between Russian Izobilnoye gas plant to Ankara. Russia's land section is 373 km ending in Beregovaya terminal at a small town in the south of Novorossiysk port. The offshore section is 396 km long starting from Beregovaya terminal and ending in Durusu Terminal close to Samsun at the Black Sea coast of Turkey. From there, a 444 km long section brings Russian gas to the terminal in Ankara. The sub-sea part of the pipeline is 2.2 km depth and is one of the deepest pipelines in the world. The Russian land section is owned and operated by Gazprom and Turkey's section by BOTAŞ. The offshore section, on the other hand, is owned by the Netherlands based Blue Stream Pipeline B.V., which is a joint venture of Gazprom and Italian ENI. The construction of the pipeline started in 2001, four years after the agreement signed in 1997 due to several discussions and protests over the agreement between Turkey and Russia. The construction ended in early 2003 and flow of natural gas started by then. However, the inauguration of the project could only be organized on 17 November 2005 due to the price dispute between Turkey and Russia.[314] The agreement between these two countries foresees a purchase agreement for 25 years based on the sale of 16 bcm natural gas annually.[315]

The main purpose of Blue stream pipeline was to deliver Russian gas to Turkey and avoiding the third countries. At that time, Turkey's energy consumption was continuously increasing and Blue Stream was one of the options for a supply solution. By selecting Blue Stream, not only price increases due to transit fees would be eliminated but also it was argued that the Russian gas is comparably cheaper than other alternatives; i.e. the Turkmen

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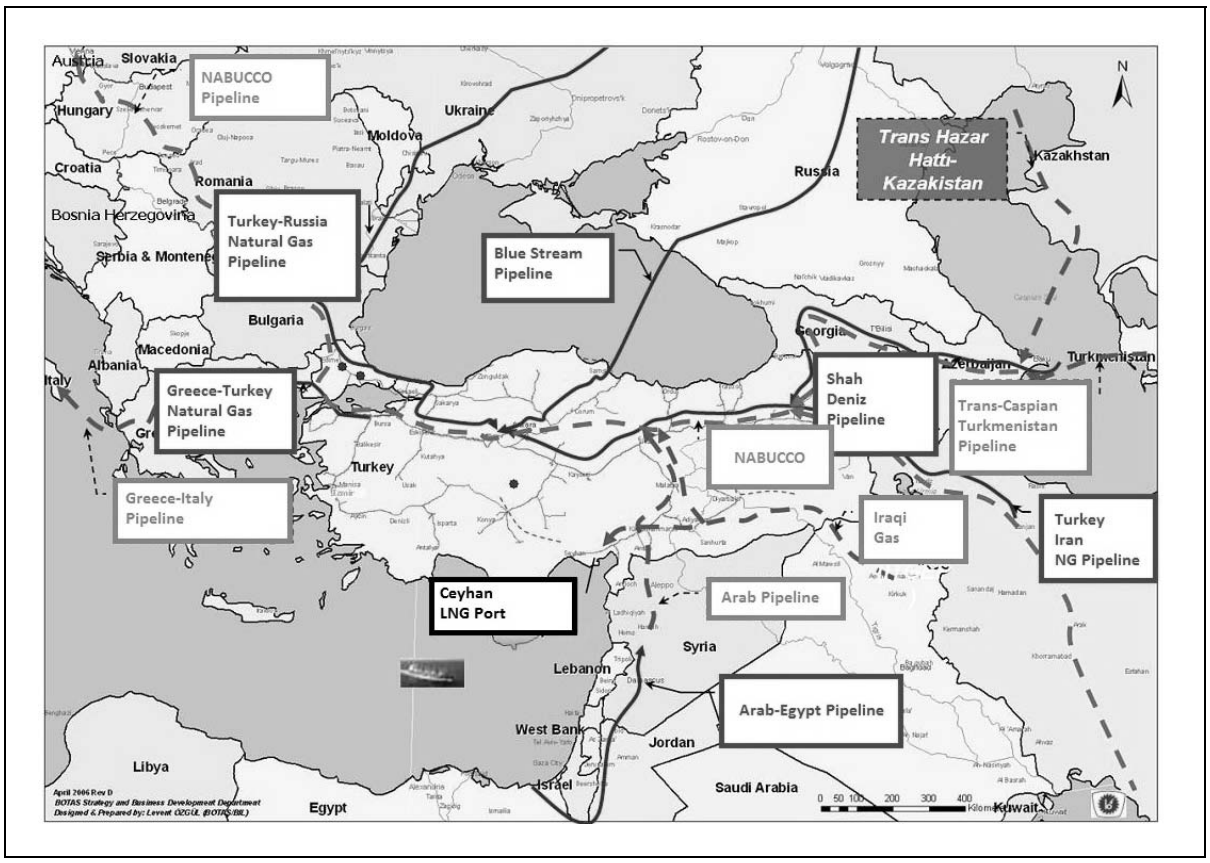
detriment of Turkey by high prices agreed on Russian gas. For details, see: Ögütçü, Mehmet, "Caspian Energy Poker Game and Turkey: Prospects for a New Approach", paper presented to *Conference on International Energy Security and Regional Instabilities – Strategic Perspectives of Globalization, Geopolitics and Regional Power Balance in the 21st Century,* 6-7 November 2000, Berlin.

[314] For more details about the project, see: Blue Stream, 2009, *ENI,* retrieved 14 Januarry 2009 from http://www.eni.com/en_IT/innovation-technology/eni-projects/blue-stream/blue-stream-project.shtml; Blue Stream, 2009, *Gazprom*, retrieved 14 January 2009 from http://www.gazprom.com/production/projects/pipelines/ bs/; Mavi Akım Vanası Resmen Açıldı, *BBC Turkish,* retrieved 14 Januarry 2009 from http://www.bbc.co. uk/turkish/europe/story/2005/11/051117_bluestream_pipeline.shtml.

[315] Blue Stream Contracts Signed, 2000, *Pipeline &Gas Journal,* Vol. 227, No.1, p. 14.

gas. In addition to this price advantage, having a direct line to the Russian pipeline net has been argued as a great contribution to Turkey's ambitious plan of becoming an energy distributor.

Map 3.4. The Route of Existing Import Pipelines



Source: http://www.botas.gov.tr/index.asp

However, some others[316] argue that blue stream is both economically and strategically in disadvantage of Turkey. According to this view, Turkey has become very much dependent on Russian gas as a result of Blue Stream project and regional balance between Turkey and the Russian Federation has shifted in favor of the latter. On the other hand, some arguments about the Blue Stream reinforce the proponents of the project. For example, there is a project for providing Russian gas to Israel via Turkey. Gazprom' President Mr. Alexey Miller and Turkey's former Energy Minister Mr. Hilmi Güler met early 2009 and discussed on further energy cooperation between the two countries. On the top of their

[316] Özdemir, Volkan, 2007, "The Blue Stream Natural Gas Pipeline: Implications on Energy Security and Foreign Policy", *Orta Doğu ve Kafkasya Araştırmaları Dergisi,* Cilt:2, Sayı: 3, pp.135-148.

agenda was the Blue Stream II pipeline which will deliver natural gas to Israel. Another international development that may contribute to the defenders of Blue Stream is the South Stream Project developed by Russia primarily as an alternative to Turkey's Nabucco project. It is clear that Russia is searching for alternative ways for supplying gas to Europe that eliminate transit countries. As in the cases of Ukraine or Belarus, any disagreement between Russia and transit countries may cause a disruption in the European energy markets. This is the main reason that Germany and Russia is working on Northern Stream Pipeline. From this point of view, South Steam pipeline is a project that proposes a direct route to Europe from Russia. Then, as Mr. Miller envisages, Turkey and Gazprom may become strategic partners in energy politics.[317] This partnership may include gas delivery to European countries as well. Therefore, Blue Stream project may be much more important for Turkey than solely supplying natural gas for Turkey's own requirements.

To conclude, Blue Stream Pipeline connected Turkey to the hegemon of natural gas: Russia. Although, this project increased Turkey's dependence on Russian gas, it also increased Turkey's capabilities as an actor of regional energy politics. Since stability in and reliability of Turkey is much higher than other buffer states like Ukraine or Belarus, there is a possibility of being a bridge between Russia and Europe. From this point of view, the Blue Stream project is an element of Turkey's increasing transit role.

3.3.2.4. South Caucasus Pipeline

After the BTC crude oil pipeline has become operational and profitable for both countries, the energy relations between Turkey and Azerbaijan has gained a momentum. In light of this, another project was designed to transport the Caspian gas to initially Turkey and later on to the world energy markets. South Caucasus Pipeline which is also known as Baku-Tbilisi-Erzurum pipeline, is planned as a 42 inch diameter pipeline parallel to the route of BTC crude oil pipeline. The starting point is Shah Deniz gas field in the Azeri sector of the Caspian Coasts and it ends at

the Turkish-Georgian border. The pipeline lays 442 km long in Azerbaijan and 248 km long in Georgia. From the Turkish border, an internal pipeline connects the Azeri gas to

[317] İkinci Mavi Akım Projesi Masada, 2009, *CNNTürk.com*, retrieved 25 August 2009 from http://www.cnnturk.com/2009/ekonomi/genel/03/26/2.mavi.akim.projesi.masada/519684.0/index.html.

the domestic supply grid near Erzurum. Main line construction activities commenced in late 2004 and were completed in May 2006 and the total midstream investment is about 1.3 billion USD, which was covered by the shareholders of the project. Because the line lays parallel to BTC, some part of the construction costs could be saved. As in the BTC project, an international consortium has been formed to build and operate the pipeline. As shown in table the majority stockholders of the project are BP and Statoil. TPAO and TOTAL has a considerable share similar to BTC. However, this time Russian and Iranian companies have also taken role in gas delivery to Europe.[318] The initial capacity of the pipeline is planned as 8.8 bcm of gas annually. However, the Shah Deniz development program by BP, Statoil and SOCAR is expected to increase this level to 20 bcm of gas at the earliest in 2012.

Table 3.5 Ownership Structure in South Caucasus Pipeline

Company	Share (in percent)	Country of origin
BP Exploration Ltd.	25.5	United Kingdom
Statoil	25.5	Norway
SOCAR	10.0	Azerbaijan
LUKoil	10.0	Russia
Naftiran (NICO)	10.0	Iran
TOTAL	10.0	France
TPAO	9.0	Turkey

Source: BP, www.bp.com

The pipeline currently supplies natural gas for Turkey and Georgia, but when the above mentioned production development process ends, the Azeri gas will be pumped to the European gas network via Turkey-Greece and Greece-Italy pipelines as well as Nabucco.[319] Moreover, the future plans for a trans-Caspian pipeline project may also increase the gas in SCP by connecting the Kazakh and Turkmen gas fields into this line. Most of the current gas in this pipeline is used by Turkey, while a small portion of the Azeri gas (5 percent of the annual flow) is used by Georgia in exchange for the transit fee.

[318] Press Release: SCP Commissioning Commences, 2006, *BP,* retrieved 20 September 2008 from http://www.bp.com/genericarticle.do?categoryId=9006615&contentId=7018471.
[319] Shah Deniz taps primed, 2006, *Upstream Online,* retrieved 20 September 2008 from http://www.upstreamonline.com/live/article119108.ece.

Moreover, Georgia has a right to purchase a further 0.5 bcm of gas a year at a discounted price.[320]

There are also still some questions over BTC pipeline. Although the gas is currently transferred to Turkey and Greece via Turkey-Greece interconnector, the price offered by Turkey posed a problem on Azeri-Turkish relations. The price Turkey offered for Azeri gas is lower than Russian charges from Azerbaijan. Therefore, the improving Azeri economy and parallel increase in energy needs enforce Azerbaijan government to ask for a higher price for the gas exported to Turkey.[321] In addition, Greek and Azerbaijani governments agreed on energy supply cooperation.[322] In that respect, Azeri government is interested in selling directly to Europe with a more profitable price is more rather than the price offered by Turkey. However, Turkey keeps the right of an annual supply of 6.6 bcm from the Azeri line. Another problem for BTE is related to the transit country: Georgia. First of all, Georgia has severe political instability due to the conflicts in South Ossetia, in which Russia has a direct influence. Because of the safety problems related to this question, the operation of the pipeline was suspended in August 2008 by BP, who is the operator of the pipeline. Gas supplies were resumed in a few day but the risks of similar shortages prevails unless the political stability in Georgia is guaranteed.

The second problem related to Georgia is about sharing the Azeri gas. Georgia is actually in need of Azeri gas and in cases of a decrease in supply from Shah Deniz fields, sharing the gas was a matter of discussion between Turkish and Georgian officials[323]. However, this problem has been easily solved between the two countries because Azerbaijan has provided more gas. Last but not least, the Turkish government's initiative for a rapprochement[324] with Armenia has brought a negative impact on Turkey -

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[320] For more details about South Caucasus Pipeline, see: South Caucasus Pipeline, 2010, *BP,* retrieved 21 May 2010 from http://www.bp.com/sectiongenericarticle.do?categoryId=9006670&contentId=7015095; Billmeier, Andreas, et.al, 2004, 'In the Pipeline: Georgia's Oil and Gas Transit Revenues'*, Middle East and Central Asia Department,* IMF Working Paper No: 04/209, pp. 5-7.

[321] Özerkan, Fulya, 2008, "Turkish-Azerbaijani deadlock over pipeline gas", *Turkish Daily News,* 24 September 2008.

[322] Greece, Azerbaijan agree to promote energy relations, 2008, *Embassy of Greece Washington DC,* retrieved 20 September 2008 from: *http://www.greekembassy.org/Embassy/content/en/Article.aspx?office=1&folder=19& article=23124.*

[323] Özerkan, Fulya, 2007, "Energy to lead Tbilisi agenda", *Turkish Deaily News,* 7 February 2007.

[324] Arsu, Şebnem, 2009, "Turkey and Armenia to Establish Diplomatic Ties", *The New York Times,* 31 August 2009.

Azerbaijani relations. The flag crisis following the protocol signed between Turkey and Armenia in Zurich on 10 October 2009 has not last long.[325]

However, it was clear that any improvement in Turkey-Armenia relations would have negative impact on gas issue. A couple of days after Turkey's Armenian rapprochement begun, Azerbaijan's President Aliyev reminded the problem of low gas price between Turkey and Azerbaijan. [326] It was a clear reaction to Turkey's 'Armenian initiative'. For some experts, Azerbaijan naturally reacted to Turkey, yet they have no other option. Azerbaijan's rhetoric about a strategic partnership with Russia would not mean anything than a political maneuver since Russia provides military backup of Armenia.[327] Some others argue that Turkey's Armenian initiative is not primarily for developing economic relations with Armenia because Armenian market is a very limited economic area. Turkey's actual aim is to improve the relations between Azerbaijan and Armenia. This would help Azerbaijan to be open to Black Sea as well as Turkey to influence an area from Northern Iran to Caspian basin.[328]

Although there are certain instances that affect the development of Baku-Tbilisi-Erzurum project, South Caucasus Pipeline is vitally important both for Turkey and Azerbaijan. Even if the re-exported part of the Azeri gas is not considered, the amount of gas delivered Turkey by the BTE pipeline is almost equal to one-quarter of the gas received from Russian Federation. In other words, BTE directly contributes to Turkey's efforts for diversification of energy supplies. BTE pipeline also contributes for Turkey's ambitious plan to become a regional centre of energy transportation. This is more important than the diversification issue because as the number of pipelines directed to Turkey from energy producing countries increases; the possibility of more assertive projects like Nabucco increases as well.

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[325] Flag crisis with Azerbaijan comes to an end, 2009, *Sabah,* 28 October 2009*, retrieved 8 December 2009 from http://www.sabahenglish.com/world/8621.html.*

[326] Türkiye'ye Doğalgaz Tehdidi, 2009, *Bugün,* 18 Ekim 2009, retrieveed 8 December 2009 from http://www.bugun.com.tr/haber-detay/81019-turkiye-ye-dogalgaz-tehdidi-gundem-haberi.aspx.

[327] Şamiloğlu, Famil, 2009, "Türkiye'nin Ermenistan Açılımı ve Azerbaycan", *USAK Stratejik Gündem,* retrieved 8 December 2009 from http://www.usakgundem.com/haber/45806/-haber-analiz-t%C3%BCrkiye%E2%80%99 nin-ermenistan-a%C3%A7%C4%B1l%C4%B1m%C4%B1-ve-azerbaycan.html.

[328] Arıboğan, Deniz Ülke, 2009, "Ermenistan değil, Azerbaycan açılımı", *Akşam,* 9 October 2009.

3.3.2.5. Iran-Turkey Pipeline

With its vast natural gas reserves, Iran has always been an important actor of energy politics. Turkey, on the other hand, has been in need of diversification of its resources. These two countries have for centuries had no border disputes. Even the ideological diversification after the Iranian Revolution of 1979 did not fatally destroy the Turkish Iranian relations. In light of this, the two neighboring countries of the region have decided to improve their energy trade. The agreement between Iran and Turkey was signed in 1996. The construction had begun the same year and ended in 2001.

Iran-Turkey pipeline is one of the longest one with a length of 2577 km. As usual, BOTAŞ operates the Turkish sector of the pipeline and the cost of that part was 600 million USD. As shown in Map 3.2, it starts from Tabriz in North West Iran to the natural gas terminal near Erzurum in Turkey. In 1996 agreement, an annual transfer of 10 bcm of natural gas flow from Iran to Turkey was planned. However, as depicted in Table 3.2, not more than 6 bcm of gas could be transferred to Turkey due to several reasons.[329]

The first problem causes Iran-Turkey pipeline to fail with a full capacity is the hard weather conditions in Iran. Because of the sanctions on Iran and lack of investment, Iran cannot develop the existing oil fields. In times of hard winter, the Tabriz fields are unable to feed Iran-Turkey pipeline because of the increased domestic demand in Iran. Therefore, Iranian gas authority decreases pumping to Turkey. In early 2008, Turkey faced with a series of cut-off by the Iranian side[330].

Moreover, Iran's ability to send gas to Turkey also affected from decisions taken by Turkmenistan. When Turkmenistan decreases gas transfer to Iran, the latter can no longer be able to send gas to Turkey.[331] Another problem causes disruptions in gas flow from Iran is explosions on the pipeline. The attacks provoked by terrorists are not something

[329] Hakman, Selahattin, 2009, 'Türkiye'nin Enerji Arz Politikaları', İstanbul: Türkiye-AB Karma İstişare Komitesi, pp. 1-9.
[330] Cold halts Iran gas exports to Turkey, 8 February 2008, *Reuters UK,* retrieved 15 November 2010 from http://uk.reuters.com/article/idUKL0881580820080208.
[331] İran gazı kesti, Türkiye'yi Silivri'deki depo kurtardı, 2 Ocak 2008, *Star,* retrieved 12 September 2009 from http://www.stargazete.com/ekonomi/iran-gazi-kesti-turkiye-yi-silivri-deki-depo-kurtardi-80780.htm.

unusual[332] for this pipeline and cost Turkey very high in terms of energy disruption and security spending.

The importance of Iranian gas is naturally very high from Turkey's perspective. Not only the current flow of North Western is significant, but also the potential of South Pars Fields of Iran will be an indispensable part of energy relations between Turkey and Iran. The increasing interest on Austria's OMV over Iranian natural gas reserves reinforces the importance of Iran for the energy hub role of Turkey.

However, the price issue has been another source of discussion. Since the first years of transfer, the price of Iranian gas has been higher than Russian gas.[333] The current level of Iranian production is far from satisfying all its needs, therefore the price for Iranian gas is higher than Russian gas. In order to solve this problem, Turkey has proposed several projects to Iran for energy cooperation. As a result of Turkey's efforts, two countries signed a memorandum of understanding in November 2008.[334] A comprehensive agreement between two neighboring countries envisages not only transfer of natural gas to Europe via Turkey but also cooperation in development of new fields and construction of natural gas power stations. The commissioning of this project at least will double the capacity of current Iran-Turkey pipeline capacity. Turkey goes ahead with Iranian agreement despite the out laud criticism of United States.[335]

Moreover, the accord signed among Turkey, Bulgaria, Romania, Hungary and Austria on transit of gas via Turkey reinforced Turkey's Iranian approach.[336] In short, Iran – Turkey pipeline is currently useful for Turkey to increase energy independence, but its significance will be much more than today when pipelines from Turkey to Europe start pumping.

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[332] Iran-Turkey pipeline blast cuts gas flow, 10 September 2007, *ReutersUK,* retrieved 12 September 2009 from http://uk.reuters.com/article/idUKL1029395120070910.
[333] Erdoğan'ın İran gezisine doğalgaz damga vuracak, 2004, *Sabah*, 12 September 2009 from http://arsiv.sabah.com.tr/2004/07/27/eko101.html.
[334] İran'la dogalgaz anlaşması tamam, 18 November 2008, *NTVMSNBC,* retrieved 12 September 2009 from http://arsiv.ntvmsnbc.com/news/466239.asp.
[335] Türkiye – İran doğalgaz hattına ABD engeli, 2007, *Hürriyet,* 16 July 2007.
[336] Turkey sign Nabucco gas transit agreement, 13 July 2009, *Reuters,* retrieved 12 September 2009 from http://www.reuters.com/article/idUSLD63762220090713.

3.3.2.6. Turkey-Greece Inter-connector

The pipeline between Turkey and Greece is an important part of East-West energy corridor project. Beginning in Karacabey (North-West Turkey) the pipeline passes the Marmara Sea and reaches to the Komotini in Eastern Greece. The pipeline is 285 km long and the diameter of the pipeline is 36 inches. When compared with other pipelines of Turkey, it is slightly narrow and has a capacity of 7 bcm of gas annually. The capacity of the pipeline is expected to be expanded to an annual of 11 bcm of which 8 bcm will be transfered to Italy.[337] The owners and operators of the pipeline are national gas companies of Turkey and Greece, BOTAŞ and DEPA, respectively. The construction of the project started in 2005 and the inaugration of the pipeline took place in late 2007.[338] The Turkey-Greece inter-connector is strategically important because it provides an early flow of Caspian gas to Europe. The economic and continuous gas supply to Greece and Italy via Turkey is an important indicator of stability, thus supply security. This, in turn, will affect the perception of EU members on other routes to Europe passing through Turkey, such as Nabucco. From this perspective, the level of current natural gas flow to Greece justifies the reliability of Turkey. Moreover, the agreement between Greece and Bulgaria for linking their gas grids is another example of increasing confidence on Turkey as a reliable transit country for Caspian and other Eastern sources of energy supply.[339]

3.4. A Brief Evaluation of Turkey's Position in Energy Politics

The given information above helps to conclude certain points about Turkey and energy politics. First of all, it is clear that Turkey is an energy poor country. There may be potentials both in Southern regions of the country or in Black Sea coasts. In that sense, offshore prospects for natural gas is increasing. However, the current energy outlook of the country is not so promising when compared to oil and gas rich neighboring regions such as the Middle East and Central Asia.

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[337] Grohmann, Karolos, 2007, 'Greece Turkey to open joint gas pipeline', *Reuters,* retrieved 14 September 2009 from http://uk.reuters.com/article/2007/11/16/greece-turkey-pipeline-idUKL1256108720071116.
[338] Türkiye-Yunanistan doğalgaz boru hattı açıldı, 18 Kasım 2007, *Hürriyet.*
[339] Greek-Bulgarian Gas Pipeline Agreement Signed, 2009, *Embassy of Greece Washington DC,* retrieved 14 September 2009 from: http://www.greekembassy.org/embassy/Content/en/Article.aspx?office=3&folder=1013&article=24714&hilite=geostrategic.

Secondly, geographical location of the country permits to become a transit country between the energy rich suppliers and energy demanding European countries. Particularly the natural gas and oil reserves of Caspian Basin are restricted with bordering countries. As the most reliable and most democratic of those countries, Turkey seems to be best alternative for Caspian resources. The BTC and BTE are the most obvious examples of this fact. If realized, Nabucco project will further strengthen Turkey's hub role in a world of decreasing energy resources. As well as Caspian resources, Turkey has long been a route for Iraqi oil to reach the world markets. Despite the embargo on Iraq since 1990, Turkey still emerges as the most probable pipeline route particularly for Northern Iraqi oil.

Thirdly, members of the EU are urgently in need of energy sources. They are heavily dependent on Russian energy, which results in vulnerability in foreign relations with Russia. The recent crises of Ukraine and Belarus have already intensified the anxiety among Europeans. On the other hand, Turkey seems to be a viable route for these countries to reach the untouched Caspian resources as well as gigantic Middle Eastern reserves. In line with this point, there are pipelines and other infrastructure that are already installed in the east-west direction through Turkey, which normally requires a considerable time and high level of capital to invest. Most of those investments are initiated for the purpose of providing domestic energy security. However, the capacities of the existing installations have been constructed as if they will transfer more of energy sources than Turkey's domestic market needs. Therefore, the current energy infrastructure is an encouraging asset for Turkey. An interesting point here is the fact that Turkey has developed its relations with Russia in terms of energy cooperation. Not only the construction of the first nuclear energy plant of Turkey, but also transfer of Russian oil from a pipeline crossing the Anatolian peninsula instead of the Straits are among the topics of Russian-Turkish energy deal.

Last but not least, Turkey is a stable country with a long political, economic and military cooperation background with the Western world. Therefore, Turkey may be a reliable partner for the EU members. When compared to former Soviet Union members such as Ukraine or Belarus, Turkey is even a better route for transferring the Russian hydro-carbon resources. Being aware of this fact, the European Commission has also

declared support the ongoing feasibility studies of the Nabucco project. In addition to this, with its democratic institutions and cooperation with international institutions, Turkey has proved to be a better alternative to Caspian resources when compared both with Iran or Russia. However, it should be remembered that decisions in international relations are not contingent on certain ceteris paribus conditions. A more profitable option for BTC would be directly going the pipeline through Iranian territory. Similarly passing through Armenia would be much cheaper when compared with the current line going to Tbilisi in North which caused unnecessary construction costs. However, other things in politics required BTC to follow the currently existing route. As in this example, many advantages of Turkey would become ineffective in decision making process due to several political reasons. Generally speaking, those reasons are resulted both from structural and unit level effects on actor decisions as neo-realism envisages. Therefore, next chapter will provide a broader analysis on energy policies of Europe with respect to neo-realist paradigms and Turkey's role within this scheme.

CHAPTER IV

AN NEO-REALIST EVALUATION OF ENERGY POLITICS IN EUROPE AND TURKEY'S CONTRIBUTION TO EUROPEAN ENERGY QUESTION

4.1. General View of Global Energy Politics

The increasing world population, technological innovations and other developments that improve conditions for a better life have brought an undesirable consequence: Rapid increase in energy consumption. Economists argue that human needs are infinite while the resources are limited. This argument on scarce resources is completely relevant as far as energy consumption and the current level of reserves are considered. In addition to this, industrial production capacities in other parts of the world, such as China and India, have developed in a rapid pace since the end of the Cold War. As a result of the restructuring of production at global scale, redistribution of energy resources among the industrially developed nations has become a necessary arrangement. Furthermore, the growing problem of depletion in most of the energy rich regions has made the energy question more complicated.

From this point of view, the acceleration of energy demand in European countries should somehow be solved by the leaders of these countries in cooperation with the leading elite of the EU. As it was widely examined in Chapter 2, the policies *declared* by member states in energy issues are in conformity with each other as well as the Union objectives.

However, on certain issues, the member state preferences and practices somehow differ from the community interests. There, a gap emerges between their declared policies and actual implementation of energy policies. However, in order to become more competitive in a global world market and more powerful in a new political structure which may be characterized by a slight move from uni-polarity to multi-polarity, member states in particular and the Union in general should develop coherent and long-term approaches in energy issues as a part of foreign policy.

Being aware of this fact, member states are in search of policies for developing new energy sources. Furthermore, the Commission works on proposals aiming to integrate energy markets within the Union as well as promoting energy efficiency and diversification of resources. However, these political efforts of the actors in Europe sometimes contradict with each other. When the interests of actors are in conflict with each other, compromise is hardly achieved. Therefore, the actual behaviors of states are more important than their expressed policies. For a comprehensive understanding of energy politics at the European level, the positions and practices of actors within the EU as well as external actors producing energy resources are vitally important. Being highly dependent on Russian energy supplies, European countries currently search for projects delivering resources from other energy rich countries such as Iran, Qatar and some CIS members in the Caspian basin. However, the same energy rich regions are also targeted by China and India, whose energy demand grows more than European countries. Furthermore, the superpower of the uni-polar world, the U.S., has also certain policies and interests in these regions. There are arguments that the invasions of Afghanistan and Iraq have been regarded not solely as a result of combat against terrorism but also a struggle for control over energy rich regions.[339] On the other side of the game, energy producing countries have also policies to maximize their interests and/or protect their countries from the aggressive energy policies of others. For instance Russia, as an important energy producer,

[339] Even before the invasion of Iraq, Mearsheimer and Walt believed that Iraq could be deterred even if that country acquired nuclear arsenal. See: Mearsheimer, John J. and Walt, Stephen M., 2002, "Can Saddam Be Contained: History Says Yes", *Belfer Center for Science and International Affairs International Security Program Occasional Paper,* retrieved on 25 March 2009 from http://www.comw.org/qdr/fulltext/mearsheimerwalt.pdf.

has been utilizing energy resources as a tool of its foreign policy. This became overt with several crises between some of the former Soviet republics and the Russian Federation.

From this perspective, it becomes clear that energy policies should not be restricted as a part of economic policies of international actors. Energy resources have turned into a strategic matter that concerns the survival of states in current world order. Generally speaking, great powers are directly related to the energy politics because all of the major powers of current international system are industrially developed nations and they are responsible for the greatest share of the world energy consumption. The scarcity of resources, in turn, causes conflict of interests among major powers, who have different plans for the same energy region.

In more concrete terms, the post Cold War period can be defined as a uni-polar structure where the United States assumes the role of a superpower. The unipolarity is expected to be challenged by other major powers, yet other major powers are still away from balancing the United States. Therefore, arguments about a multi-polar international system are far from defining the actual situation, where the military capabilities as well as spending of the leading superpower are still greater than the total of the following five major powers. This makes an open challenge to unipolarity impossible at the moment. However, Russian efforts for balancing the United States as well as the rise of China and India as potential great powers increases the possibility of a future multi-polar international system. The multi-polarity, however, develops particularly in terms of economics rather than military capabilities. Since economic capabilities are becoming more important in determining the structure of international political system, energy resources gain more vitality. In such an intricate atmosphere, all major international actors are expected to engage certain activities in order to secure their future energy requirements. Therefore, the economic outlook of major international actors should also be taken into consideration in order to understand the current paradigm that explains international system.

4.2. An Analysis of Economic Capabilities of Major Powers

As previously mentioned, energy is an important element of foreign policy since most of the capabilities of an actor depends on having sufficient energy resources. Energy

resources provide leverage in terms of economy. Therefore, energy politics require an economic perspective as well as political evaluation. In more concrete terms, an analysis of economic capabilities of major international actors should be taken into consideration in order to evaluate energy policies because the distribution of economic power is slightly different from the distribution of military power and a turn into multi-polarity mostly occurs in the sphere of economic fields.

Table 4.1. Gross Domestic Product (GDP) at constant 2005 prices – US Dollars (Billions)

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	7,969,500	845,224	536,130	352,268	269,684	1,569,130	2,198,324	1,624,938	1,453,346
1991	7,948,600	802,964	585,454	353,759	272,183	1,547,281	2,310,620	1,641,439	1,475,636
1992	8,219,300	686,533	668,586	372,934	288,471	1,549,550	2,362,051	1,663,871	1,487,042
1993	8,455,400	626,804	762,215	391,413	311,670	1,583,983	2,343,103	1,648,669	1,473,834
1994	8,803,300	547,200	862,041	420,626	294,666	1,651,781	2,405,362	1,685,194	1,505,549
1995	9,027,700	524,765	956,255	452,786	315,856	1,702,200	2,450,838	1,720,871	1,548,111
1996	9,369,400	505,833	1,051,852	486,268	337,983	1,751,314	2,475,200	1,739,977	1,565,068
1997	9,791,600	512,819	1,149,661	508,044	363,429	1,809,236	2,519,864	1,778,912	1,594,371
1998	10,222,500	485,410	1,239,310	538,463	374,666	1,874,491	2,571,025	1,841,229	1,616,713
1999	10,720,300	516,238	1,333,501	576,848	362,057	1,939,584	2,622,727	1,902,004	1,640,386
2000	11,167,700	568,098	1,445,552	600,097	386,584	2,015,530	2,706,912	1,976,377	1,700,969
2001	11,289,800	597,020	1,565,647	631,404	364,559	2,065,139	2,740,477	2,013,027	1,731,896
2002	11,496,100	625,342	1,708,185	655,187	387,029	2,108,445	2,740,477	2,033,692	1,739,759
2003	11,783,800	670,699	1,879,053	710,032	407,408	2,167,654	2,734,522	2,055,806	1,739,465
2004	12,206,200	718,662	2,068,930	768,939	445,552	2,231,619	2,767,547	2,106,590	1,766,111
2005	12,579,700	764,568	2,302,719	840,470	482,986	2,280,112	2,788,390	2,146,530	1,777,694
2006	12,916,100	823,254	2,595,164	919,774	516,280	2,343,678	2,882,320	2,194,115	1,813,888
2007	13,192,100	889,616	2,963,678	1,008,386	540,383	2,406,605	2,958,925	2,246,214	1,840,774
2008	13,247,500	939,581	3,248,191	1,060,003	543,945	2,405,034	2,988,160	2,251,087	1,816,505
2009	12,898,808	865,354	3,543,776	1,141,155	518,446	2,285,095	2,847,130	2,191,916	1,724,987

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

Certain indices showing economic capabilities are very important to make a systemic analysis about the distribution of power among international actors. These are Gross Domestic Product (GDP), GDP per capita, and growth rate. The following three tables present these indices since the end of the Cold War. As depicted in Table 4.1, the total of four bigger EU members could only equal to the 85 percent of the GDP of U.S. in 1990. This gap increased in a decade and the four European powers could only have a GDP only equals to 75 percent of the GDP of the United States. This shows that the winner of the Cold War experienced a better economic performance when compared to its European allies during the early years of the unipolar structure. In the same period, Russian economy had a very difficult period and the GDP of the country decreased around 30 percent. In

other words, Russian GDP could only represent 5 percent of the GDP of the US in 2001 while the same ratio was more than 10 percent of the US's GDP in 1990. In terms of a systemic analysis, this means that the ability of Russia to balance the US power in economic terms decreased by the early 2000s. On the other hand, China and India experienced higher GDP growth during the same period. China tripled and India doubled the GDP while the increase of the US GDP was only around 40 percent.

The growth rates also confirm a similar conclusion. Table 4.2 depicts the growth rates of the major powers in world politics and Turkey for the same period. Throughout the 1990s, US economy experienced a stable growth rate. Particularly in the second half of the decade, the Americans achieved almost 5 percent growth rate annually. On the other hand, Russian economy shrank enormously during 1990s. In this period, however, China and India pioneered world economy with incredible growth rates. From this point of view, although Russia was the former superpower who was balancing the US in the Cold War years, China has become an actor with more economic power to balance the American power by the early 2000s. Yet, as in the military realm, the other major powers are still far from totally balancing the America's dominant position. However it should be noted that the growth rates of Russia and China are fairly greater than the United States after 2003 which corresponds with the increasing discourse on multi-polartiy among the leaders and political elites of these two major powers. The major European countries, on the other hand, depicted a similar growth rate with the United States. The power gap between Europeans and the Americans has not markedly changed since the end of the Cold War. In other words, different from Russia and particularly China, European economies did not grow rapidly in the previous decade which could develop inclinations towards a multi-polar world order.

As a regional power, Turkey doubled its GDP while European countries could only grow by 30-40 percent between 1990-2010. Turkey's economic development brought self-confidence at political arena. Being more independent in economic terms can be evaluated as a supporting factor of Turkey's new foreign policy, which sometimes set Turkey and the US at odds in particular foreign policy issues. Moreover, despite being destined to EU

membership, Turkey has become less enthusiastic about European integration.[340] Because Turkey's relations with non-EU neighborhood brought considerable economic benefits, Turkey become more interested in developing special relations with other countries such as Russia and Iran. In short, Turkey's increasing economic prosperity may somehow draw the country apart from its traditional Cold War allies and thus may have an impact on the foreign policy of Turkey in a multi-polar structure.

Table 4.2. GDP Growth rate - Percent

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	1.86	NA	3.83	5.66	9.26	0.78	5.26	2.64	2.05
1991	-0.26	-5.00	9.20	0.42	0.93	-1.39	5.11	1.02	1.53
1992	3.41	-14.50	14.20	5.42	5.98	0.15	2.23	1.37	0.77
1993	2.87	-8.70	14.00	4.95	8.04	2.22	-0.80	-0.91	-0.89
1994	4.11	-12.70	13.10	7.46	-5.46	4.28	2.66	2.22	2.15
1995	2.55	-4.10	10.93	7.65	7.19	3.05	1.89	2.12	2.83
1996	3.79	-3.61	10.00	7.39	7.01	2.89	0.99	1.11	1.10
1997	4.51	1.38	9.30	4.48	7.53	3.31	1.80	2.24	1.87
1998	4.40	-5.34	7.80	5.99	3.09	3.61	2.03	3.50	1.40
1999	4.87	6.35	7.60	7.13	-3.37	3.47	2.01	3.30	1.46
2000	4.17	10.05	8.40	4.03	6.77	3.92	3.21	3.91	3.69
2001	1.09	5.09	8.31	5.22	-5.70	2.46	1.24	1.85	1.82
2002	1.83	4.74	9.10	3.77	6.16	2.10	0.00	1.03	0.45
2003	2.50	7.25	10.00	8.37	5.27	2.81	-0.22	1.09	-0.02
2004	3.58	7.15	10.10	8.30	9.36	2.95	1.21	2.47	1.53
2005	3.06	6.39	11.30	9.30	8.40	2.17	0.75	1.90	0.66
2006	2.67	7.68	12.70	9.44	6.89	2.79	3.37	2.22	2.04
2007	2.14	8.06	14.20	9.63	4.67	2.68	2.66	2.37	1.48
2008	0.42	5.62	9.60	5.12	0.66	-0.07	0.99	0.22	-1.32
2009	-2.63	-7.90	9.10	7.66	-4.69	-4.99	-4.72	-2.63	-5.04

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

Gross Domestic Product and growth rates of the major powers indicate a clear move to multi-polarity from an economic perspective. Particularly China emerges as the most prominent potential rival for the US in the future while Russia is recovering its position by the help of revenues from energy resources. However, another indicator is also important to evaluate the economic power struggle among international actors in the long-run. Table 4.3 shows GDP per capita of major powers and Turkey in last two decades. GDP per capita of these countries shows that the economic prosperity of the major powers is not parallel to the results of GDP growth. In other words, although Chinese economy grows incredibly, the people living in that country do not benefit much from that wealth when compared to

[340] Turkey's economic development is not the only factor decreasing Turkey's enthusiasm about EU. The constructed impediments against Turkey by Europeans is also shifting Turkey's inclination towards EU membership.

western world. India has also a similar problem. When combined with unequal income distribution, the lower level of GDP per capita may cause domestic political problems within a country. With such a problem, how long China can sustain balancing the US both in economic and military terms becomes an ambiguous question.

Table 4.3. GDP Per Capita GDP – US Dollar

Year	USA	Russia	China	India	Turkey	UK	Germany	France	Italy
1990	22,580	3,846	361	379	3,611	17,692	21,584	21,342	19,886
1991	23,044	3,773	373	329	3,557	18,396	22,632	21,234	20,954
1992	24,106	3,298	434	324	3,682	18,969	25,648	23,326	22,169
1993	25,043	3,076	550	310	4,103	16,999	24,781	21,847	17,861
1994	26,298	2,743	495	348	2,919	18,323	26,400	22,991	18,426
1995	27,191	2,688	636	387	3,719	19,937	30,906	26,351	19,684
1996	28,401	2,644	742	401	3,918	20,955	29,797	26,314	22,034
1997	29,827	2,736	812	427	4,030	23,286	26,363	23,729	20,882
1998	31,098	1,835	854	422	4,181	24,878	26,639	24,423	21,339
1999	32,689	1,331	892	442	3,817	25,598	26,131	24,080	21,055
2000	34,390	1,771	958	449	4,011	25,082	23,152	21,830	19,213
2001	35,169	2,100	1,050	455	2,906	24,874	23,019	21,895	19,498
2002	36,020	2,377	1,151	468	3,400	27,142	24,528	23,663	21,168
2003	37,346	2,984	1,295	540	4,371	31,188	29,667	29,023	26,017
2004	39,398	4,113	1,512	642	5,582	36,734	33,323	33,012	29,642
2005	41,553	5,340	1,786	743	6,786	37,838	33,836	34,152	30,313
2006	43,626	6,942	2,142	824	7,365	40,349	35,423	35,836	31,592
2007	45,390	9,160	2,648	1,027	8,864	46,158	40,430	40,788	35,684
2008	46,105	11,794	3,360	1,085	9,881	43,401	44,181	44,639	38,532
2009	44,872	8,736	3,769	1,075	8,215	35,239	40,528	41,226	35,289

Source: United Nations Statistics Division - National Accounts
http://unstats.un.org/unsd/snaama/resCountry.asp

To sum up, although China, Russia and some other regional powers have considerable economic growth since the end of the Cold War, their current capabilities are still far from balancing the United States. The increasing economic success of these countries may help the system to evolve from uni-polarity to multi-polarity initially in economic terms. Economic multi-polarity may increase the tendency towards balancing in military sphere among other major powers. Therefore, energy resources are critically important for the shaping of international political system.

4.3. Energy Politics and Europe

In line with the changing perception of energy from an economic matter to a tool of foreign policy, major European powers have increased their attention on energy security as a result of the need to adopt themselves to the post Cold-War international structure as well

as the increased competition derived from industrially developing nations such as China and India. During the previous decade, the critical significance of energy security has been declared for many times both by government officials at member state level and by the Commission at Union level.

There are three main reasons for the increasing interest of major European powers on energy security, which are also related to the activities of other international actors. First of all, the invasions of Afghanistan and Iraq by the U.S. forces after the September 11 Events have a particular impact on European political elites. Deploying forces in Afghanistan and especially in Iraq could provide Americans an absolute control over most of the energy rich areas in Middle East, Persian Gulf and to some extent in Caspian. Otherwise, a rival power controlling that region would risk prosperity and global superiority of the U.S.[341] Although the transatlantic relations have always been cooperative than competitive, it would be unsafe to let any other international actor to control most of the energy resources that Europe may need in future. Furthermore, some of the European leaders have declared their anxiety about the increased unipolarity within the international system and American unilateralism.[342] Therefore, even if the United States has a long history of friendly relations with European powers, it may be a great risk if the energy resources that Europe needs are controlled by a non-European force. This should be read as a necessity for Europeans to defend themselves in case they lose the US protection rather than a power contest between the EU powers and the US. Put differently, if the multi-polarity goes beyond economic borders, and the other major powers such as China, Russia and/or India can engage balancing in military terms, the US may be less interested in military support for the EU and may concentrate on its own defense. In order to be ready for any contingency situation, EU should be ready to provide its own military and energy security. The initial steps by the well known 'Petersberg Tasks' and Union's decision to be able to deploy an EU force of 60,000 persons were all the examples of the structural impact on European decision makers.[343] The American leadership have also supported EU's endeavor for developing its

[341] Art, Robert, 2003, *A Grand Strategy for America,* Ithaca: Cornell University Press, pp. 45-64.
[342] German Chancellor Schröder and French President Chirac were the prominent figures questioning U.S. activities. See: Brooks and Wohlforth, 2005, *op-cit.,* pp. 93-103; Grant, Charles, 2003, "Defrosting the Entente Glaciale", *Centre for European Reform Bulletin,* Issue, 30.
[343] Treaty of Lisbon renamed ESDP as Common Security and Defence Policy and led to the termination of WEU by transfering its remaining activities to the EU. See: EU Common Security and Defence Policy:

capabilities.[344] Despite the existing Berlin-Plus agreement, the so-called 'chocolate mini-summit' in 2003 leaded by France and Germany about setting up a separate operational planning cell at Tervuren was evaluated as a starting point for a shift from tight Atlantic relationship in military planning. Moreover, Germany' and France's opposition to the US invasion of Iraq reinforced the American concerns.[345]

Secondly, Chinese aggressive search for energy resources has provoked Europeans to concentrate on energy security. China has continuously search for alternative energy sources and engaged special relationship with different countries from various parts of the world.[346] The interests of China contradict with the European plans for energy security. As a result, Chinese emerging activities in energy rich regions is another important reason for the current European interest on energy security. Last but not least, changing Russian behavior in supplying natural gas has been a critical point that draws the attention of public opinion in Europe. The Russians used natural gas supply as a foreign policy tool to enforce their policies on Ukraine[347]. They also follow a similar policy in their relations with Belarus.[348] The Russian notability as a reliable supplier during the previous decades was questioned by Europeans after those crisis in late 2000s. Therefore, the behaviors of other international powers in energy politics have a considerable affect on decisions and activity of Europeans in the energy field.

In short, since the end of the Cold War both sides of the Atlantic alliance enjoy freedom in shaping foreign policy as a result of the lack of 'common enemy'. Europeans support for US policies, thus, has become a factor of convergence among the interests of allies. The current international system increases anxiety of Europeans for being either entrapped or

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CSDP Newsletter, 2010, *Council of the European Union – EU Institute for Security Studies,* Issue 10, pp. 9-11.

[344] Hunter, Robert E., 2002, *The European Security and Defense Policy: NATO's Companion -or Competitor,* Santa Monica: RAND National Defense Research Institute, pp. *xv-xviii.*

[345] Larrabee, F. Stephen, 2009, "The United States and the Evolution of ESDP", in Vasconcelos, Alvaro de, *What ambitions for European defence in 2020?,* Paris: The European Union Institute for Security Studies, pp.51-2.

[346] Zweig, David and Jianhai, Bi, 2005, "China's Global Hunt for Energy", *Foreign Affairs,* Vol. 84, Iss.5, p.25.

[347] Simes, Dimitri K., 2009, "The Ukraine-Russia Energy Crisis", *The National Interest,* retrieved 20 September 2010 from http://nationalinterest.org/article/the-ukraine-russia-energy-crisis-2970.

[348] Slumbering energy conflict between Belarus and Russia, 2010, *Euroasia Energy Observer,* retrieved 20 September 2010 from http://www.eurasia-energy-observer.com/transneft-warns-belarus-of-possible-oil-supply-cuts.

abandoned. The easing of this tension requires an intensive diplomatic effort as well as bargaining which will enable allies to redefine their relations.[349] Since Europeans still feel this dilemma between entrapment and abandonment, and states rely mostly on their own power in order to survive in an anarchic world, European countries are naturally expected to find their own solutions for the energy question. European countries have certain alternatives which are geographically distributed around European continent. Some of these locations, i.e. Norwegian resources, can mainly be devoted to European countries while some others may be subject to a contest among energy importing countries. Therefore, this study follows a geographically-based analysis in order to investigate the relationship between energy and foreign policy behaviors of European actors.

In line with current situation, this chapter initially examines the potential sources of energy that may present the best solution to European energy security question. In this perspective, role of Russia requires a particular attention. Caspian and Middle Eastern countries also worth to consider as far as proximity and large resources of the region are considered. Moreover, they are also very important for Europe as a viable solution to the diversification problem. In each analysis of Europe's energy rich neighborhood, a closer look at the relations between European states and energy producing countries are also presented. In more concrete terms, the perception of Russian Federation by the bigger member states of the EU is analyzed after the evaluation of Russian resources. Similarly how Europeans perceive Iran, Middle East, and Caspian countries are also examined following the energy analysis of these regions.

In doing so, an analysis about energy politics should be conducted with respect to current unipolar structure and balancing efforts among the major great powers. Any discussions of policies of these actors without considering the policies of the leading power and other major powers at global level would be misleading. Since neo-realism envisages the system at the global scale and the imperatives of the international system are at work, the impact of other major actors on the formation of European energy policy should be taken into consideration. As a result, the policies of major international actors are also

[349] Ayman, Gülden, 2008, "Bir Güvenlik Sorunsalı Olarak Türk-Amerikan İlişkilerinde Irak Açmazı", in Ayman, Gülden (ed.), *Irak Açmazı: Türkiye Açısından Temel Parametreler,* İstanbul: Boğaziçi Üniversitesi – TÜSİAD Dış Politika Forumu, pp.55-6.

evaluated from the lenses of energy in the following pages of this study. Finally, the role of Turkey as a transit country between energy buyers and sellers is evaluated with respect to neo-realist explanation of international politics. The advantages and disadvantages of Turkey's strategic position for European energy security and in turn for achieving European global actorness, is evaluated from a neo-realist point of view.

4.4. Europe and Sources of Energy

As mentioned before, oil and gas are the two critical sources of energy for international actors. When compared to natural gas, oil is a more flexible resource because its trade is more convenient than gas. However, natural gas has recently become an important element of the energy mix of developed nations and it gained a critical role in energy politics of states. Therefore, securing natural gas reserves becomes more important than oil in the recent years. As far as natural gas is considered, most of European countries have traditionally been supplied by three main energy corridors. Northern Europe, Russia and North African producers have supplied almost all natural gas demand of Europe.

Norway has the leading supplier status among other European sources. Denmark, United Kingdom and the Netherlands have also considerable reserves, which other European countries benefit from. Having gigantic natural gas reserves, Russia had long been one of the most reliable suppliers of Europe at least for the last three decades. Last but not least, North African countries, mainly Algeria followed by Libya and at a lesser extend Nigeria have been the prominent suppliers of South European countries. All these energy-rich regions have already constituted 'the three main artery' of energy for the whole Europe. A closer look at these three corridors with reference to their importance for Europe may help us to understand the policies followed by major European states as well as other great powers such as China and U.S.

4.4.1. Northern Corridor

Norway is the most oil-and-gas-rich country in Europe with its huge offshore reserves in the North Sea, Norwegian Sea and Barents Sea. According to Energy Information Administration of the U.S., Norwegian proven gas reserves are more than 2200 billion cubic meters (bcm) as of 2009. The natural gas production of Norway in 2008 was almost

100 bcm.[350] With this current figure, Norwegian reserves will approximately end up in 22 years. Norway uses only 5 percent of its production in its domestic market and exports the rest to the European neighbors. Among the European customers of Norwegian gas, Germany and U.K. leads with shares of 32 and 31 percent respectively. France consumes 19 percent of Norwegian exports. Belgium and Netherlands also has a share of nearly 10 percent in Norwegian natural gas exports[351]. Table 4.1 shows the pipelines between Norway and the European countries including their length and capacities. It is clear that most of the pipelines from Norway are directed to Germany. Since the mid 1970s Germany and U.K. are the prominent consumers of Norwegian gas. Interestingly, the Europeans paid high attention to the North Sea gas during 1990s and constructed several pipelines. A few years ago, a new pipeline with a capacity equals to the quarter of Norwegian production level was constructed from North Sea to the Easington port in the U.K.[352]

Table 4.4. Main Export Gas Pipelines of Norway

Pipeline	Source	Destination	Length (km)	Capacity (bcm/year)	Date of Commissioning
Europipe I	North Sea	Dornum / Germany	670	18	1995
Europipe II	North Sea	Dornum / Germany	658	24	1999
Norpipe	North Sea	Emden / Germany	440	16	1977
Vesterled	North Sea	Scotland / U.K.	361	12	1978
Langeled	North Sea	Easington / U.K.	1166	25.5	2006
Franpipe	North Sea	Dinkirk / France	840	15	1998
Zeepipe	North Sea	Zeebrugge / Belgium	814	15	1993

Source: Table is composed by the author.

The informative data given above about the natural gas trade between Norway and other European countries may be evaluated from three aspects. First of all it shows that most of the leading European states engage in energy trade with Norway because it is the most convenient and most reliable energy source for the European countries. They consider that construction of new lines from Norway is worth to incur the costs of building those

[350] The Encyclopedia of Earth, 2009, "Energy Profile of Norway", retrived on 15 December 2009, from: http://www.eoearth.org/article/Energy_profile_of_Norway.
[351] GASSCO, 2009, "Norway's gas exports could top 100 bcm in 2008", retrieved on 15 December 2009, from: http://www.gassco.no/wps/wcm/connect/Gassco-EN/gassco/home/presse/ons2008/gasexports.
[352] GASSCO, 2009, "Transport System", retrieved on 15 December 2009, from: http://www.gassco.no/wps/wcm/connect/gassco-en/gassco/home/norsk-gass/gas-transport-system.

pipelines. For example, the cost of Langeled project for the U.K. was around 2 billion Euros. The incredible amounts that Europeans spent on these projects confirm the importance given to energy issues by member states.[353]

Secondly, gas imports from Norway clearly depict that member states are trying to guarantee their own energy security before considering a collective approach. Germany concluded, for example, Europipe II agreement which has a capacity to carry a quarter of Norwegian current annual gas to Germany's domestic grid. Similarly, France concluded another project with a pumping capacity of 15 percent of the current Norwegian gas to Dunkirk, where the Norwegian gas is distributed to national pipeline system of France. It is noteworthy that these projects are concluded nearly a decade later than the end of Cold War. The most recent example is the Langeled pipeline delivering natural gas to the U.K. The project started to operate in 2006, in a period that the Commission works hard for the deepening of the Community as well as to form a common energy policy. From a neo-realist point of view, these individual practices of member states may be evaluated as a precaution for the sake of their own energy security. The underlying motive for individualistic energy policies, moreover, may be regarded as a part of the expectations of those countries about international political structure. As long as those countries perceive a transformation to multi-polarity, they will be more inclined to develop their own capabilities. Because unbalanced multi-polarity is the least peaceful type of international structure, which poses greater threat to state survival.[354] In a world of unbalanced multi-polarity, the survival of an international actor will be in jeopardy unless that country possesses sufficient power and capabilities.

From this point of view, the policies and activities of member states about getting the Norwegian natural gas supplies completely confirm this individualistic approach rather than a pluralistic cooperative approach. If European countries had been more interested in cooperation and a common energy security objective, they would –for instance– form

[353] In fact, this amount is also important to make a comparison with the costs of pipelines planned to pass across Turkey. For instance, the cost of building Nabucco pipeline has been criticized among some leaders in Europe for several times. However, similar costs are easily accepted by major powers when the Norwegian gas is considered.

[354] For some different views on potential rivalry among Europeans, see Mearsheimer, 2001, *op-cit.,* p. 394; Layne, Christopher, 2003, *ibid.*, pp. 18-22.

energy supply areas which are distributed in terms of equity and efficiency. To state this in a different way, Germany is closer to the energy resources of Russia whereas U.K. is very far from Russian sources. Furthermore, they are equally distant from Norwegian sources. Therefore, instead of building the Europipe II, Germany would search for new pipelines from Russia and leave Norwegian gas for the use of United Kingdom or Belgium. Similarly, France would search for more Algerian gas and would not build a very long pipeline from North Sea to Dunkirk. This would not only provide an efficient sharing of energy resources but also help a considerable level of saving from the construction costs of the pipelines. Moreover, it would show the success of a unique energy policy properly functioning within the Union. However, –particularly the bigger– member states could not concentrate on a cooperation in energy security because their basic intrinsic motive of state survival have prevailed over their motivation for a cooperation[355]. This intrinsic logic of states is very clear indeed. Direct access to energy resources is a vitally important element of self-sufficiency which is an important element of internal efforts as described in neo-realism. European powers have behaved in line with neo-realist arguments and have tried to increase their own power because they may face to a rivalry for regional hegemony among major European powers. As neo-realists have argued, after U.S. forces withdraw from the European continent, there may probably be a contest for regional hegemony. Then, a balancing effort by the major powers of Europe may take place against the most powerful state. In that sense, energy resources controlled by a potential rival may have severe consequences and having direct access to those resources, thus, may be a matter of survival in an unbalanced multi-polar Europe. Thus, the systemic effects of international politics enforce European countries to behave in a selfish mode when primary national interests are at stake. In other words, major EU powers have preferred to guarantee necessary energy reserves in case of a change in power configuration at European or global level.

The activities of member states in energy field can also be read from the same point of view by examining some other examples. Britain, for instance, has recently developed a

[355] This is directly in conformity with the concept of relative gains. See: Grieco, 1988, *op-cit.,* 485-507. Even liberals accepts the impact of relative gains although they put annotation. See: Snidal, Duncan, 1991, "Relative Gains and the Pattern of International Cooperation", *American Political Science Review,* Vol.85, No:3, pp. 701-26.

project which will provide access to the Russian gas via Belgium and the Netherlands. The project costs 7.4 billion Euros and will have a capacity of 22 bcm per year[356]. The cost of a pipeline from Norway to U.K. equals only to one third of the cost of building a pipeline from Russia. Unfortunately however, most of the Norwegian gas has been shared by France and Germany. If Germany and France would divest themselves of their shares in Norwegian resources and let the U.K. benefit more from those fields, they could surely provide sufficient gas from Russian Federation and Algeria respectively. Furthermore, in any case of future gas shortages caused by a cut off from Russia or Algeria could be offset by using inter-connectors among the member states.[357] By this way, diversification of suppliers could be achieved at the Union level.

In practice, however, the member states have preferred to achieve diversification of gas suppliers by their own, which in turn results in more infrastructure costs. In addition, individual policies leave diversification question unresolved for some member states while some others enjoy great degree of energy security. Therefore, the 'self-help' oriented policies of member states towards Norwegian gas reserves confirm a neo-realist explanation of state behavior in an anarchic world order. This individualistic pattern of state behavior is in conformity with neo-realist explanation for the post-Cold War period. John J. Mearsheimer, for example, describes a multi-polar structure in Europe after the hegemonic impact of America ended:

> Without the American pacifier, Europe is not guaranteed to remain peaceful. Indeed, intense security competition among the great powers would likely ensure because, upon American withdrawal, Europe would go from benign bipolarity to unbalanced multi-polarity, the most dangerous kind of power structure. The United Kingdom, France, Italy, and Germany would have to build up their own military forces and provide for their own security. In effect, they would all become great powers, making Europe multi-polar and raising the ever-present possibility that they might fight among themselves. And Germany would probably become a potential hegemon and thus the main source of worry.[358]

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[356] Sullivan, Mike, 2009, "U.K. awaits Russian gas", *The Voice of Russia,* 2 December 2009, retrieved 12 December 2009 from http://english.ruvr.ru/2009/12/02/2474976.html.

[357] This is probably the main reason why European Commission continuously insists on developing the intra-community energy networks. For more information about Community policies, support and guidelines on Trans European Energy Network, see: http://ec.europa.eu/energy/infrastructure/index_en.htm.

[358] Mearsheimer, John J., 2001, "The Future of the American Pacifier", *Foreign Affairs*, Vol. 80, No: 5, September-October 2001, p. 52.

Mearsheimer's approach to European politics in the post-US hegemony entails completely military sentiments. In other words, Mearsheimer predicts a future political structure for Europe which is based on a power contest based on political and military capabilities. Although energy sounds like a concept related to economics rather than military issues, the current picture of energy politics in Europe may also fit to this explanation. As it was mentioned earlier, energy resources have become a function of foreign policy. Therefore, some of the specific energy policies of European major powers should be evaluated from the lenses of neo-realism because those energy policies have a direct effect on economic and military capabilities of actors. In line with this argument, two of the potential great powers in post U.S. hegemony Europe, namely Germany and France, have preferred to strengthen their own energy supplies by building new pipelines from Norway instead of leaving Norwegian resources to another major EU member: the United Kingdom. This seems complementary to Mearsheimer's explanation although energy policies do not entail an overt military purpose. Since U.K. might be another potential great power, which generally known for its close transatlantic ties, French and German policy makers do probably not totally trust the U.K. and did not prefer to leave Norwegian gas to U.K. By this way, they not only have provided energy security of their own country by diversification of suppliers, but also do not let the U.K. to be main beneficiary of the Norwegian gas.

Furthermore, Germany, for example, clearly puts forth an effort to get more shares from the Norwegian resources. German foreign policy makers are well aware of the fact that Britain's energy resources are rapidly exhausting and they are urgently in need of external resources. In that sense, Norway seems to be the most suitable source of energy for the U.K. However, Germany officially declared the importance of Norway for their energy security and defined Britain as a competitor for the Norwegian natural gas.[359]

A third aspect of Norwegian gas is about the profit of Norway from selling natural gas to other European countries. Norway does not prefer to become a member to the EU for a

[359] German-Norwegian energy partnership: a key component of Germany's external energy policy, 2009, *Auswärtiges Amt (Federal Foreign Office of Germany),* retrieved 12 December 2009 from http://www.auswaertiges-amt.de/EN/Aussenpolitik/GlobaleFragen/EnergieKlima/NorwegenEnergiepartnerschaft/Norwegen-energiepartnerschaft_node.html.

long time.[360] Norway defends the current institutional framework with centralized, government-controlled gas market and hesitates being opened to the impact of liberalization at the European gas markets. Particularly, the new European Union legislations on opening energy markets to competition would have negative consequences for Norwegian economy. In line with this policy, Norway has also engaged an activity of playing off buyers against each other in order to increase its profit from energy resources. New contracts with Czech Republic, Italy, Poland and even Spain show that Norway benefits from the policy divergences among member states.[361] From this point of view, Norway's energy policy may increase these divergences among member states in a future multi-polar Europe. In conformity with this arguement, Norwegians engage in energy trade with other major European countries. Despite the aggressive German and French interests on northern resources, Norwegian gas and oil reserves are closely followed by the United Kingdom and the Netherlands. As mentioned in the previous chapter, the U.K. was a self sufficient energy producer for a very long time. Thanks to the large coal reserves and North Sea oil and gas, U.K. was one of the few net energy exporting member states of the Union. By the 2000s, however, this trend has shifted due to the diminishing reserves in the North Sea fields of U.K. and increase in the domestic energy consumption. This dramatic decline in British reserves resulted in an increasing interest of the U.K. in Norwegian reserves. In 2004, U.K. became a net importer of natural gas and the British government proposed a plan for the Langeled pipeline project which connected Norwegian North Sea reserves to the U.K.'s national grid. This new pipeline with a capacity to transfer approximately a quarter of Norwegian annual production shows the ambition of British government in its gas competition with other continental powers.

In short, the leading energy consumers and potential great powers of the continent have recently been on the blink of an 'energy contract war' as far as Norwegian reserves are considered. Their ambition in increasing their share in northern resources confirms a neo-

[360] Norway refused EU membership for two times in 1972 and in 1994 after referendum. Some other reasons have also been mentioned as rejection, but protecting fishing and energy resources from European competition system seems to be the main two determinants for staying outside of the Union.

[361] For more detail about resources, historical development of Norwegian fields and policies and contracts between Norway and other countries, see Bartsch, Ulrich, 1999, "Norwegian Gas: The Struggle between Government Control and Market Development" in Mabro, Robert and Ian Whbrew-Bond (eds.), *Gas to Europe: The Strategies of Four Major Suppliers*, Oxford: Oxford University Press, pp. 201-253.

realist explanation about international politics. The gas competition shows the importance of energy resources in terms of power for states who have been in a process of cooperation for more than 50 years. Despite having a very long history of integration, they still engage in developing internal efforts at the regional level and try to improve their own capabilities even to the detriment of any common good of the other EU members. This situation, therefore, supports another neo-realist argument explained in Chapter 1. As Grieco stated, the possibility of cooperation in an anarchic political structure is limited to perceptions of their relative gains. States refrain from cooperation when they concern others will benefit more.[362] Unlike in other fields of European integration, member states failed to achieve a similar momentum of cooperation in energy area because they are not satisfied with absolute gains in energy cooperation. Relative gains of some member states may provide advantage which may cause serious weaknesses for others in a potential multi-polar world. Therefore, the relative vs. absolute gains concept introduced by neo-realism helps to explain the contest among major European powers in energy politics while they could have achieved considerable cooperation in other low-political issues. Since energy is directly related to military capabilities, it is regarded as a part of high-political issues.

In addition to regional balance of power, Norwegian resources are also important in terms of global balance. United States has started to import LNG from Norway in 2001 and the amount imported was doubled in 2009 when compared to a previous year.[363] Frankly speaking, it seems an insignificant indicator because the level of total LNG trade is quite low in percentage when United States gas imports or Norwegian gas exports are considered. However, it may be evaluated as an important signal from the U.S. to its European allies. American intrusion to the Norwegian gas market may cause concerns in Europe since European countries have perceived Norwegian resources as mainly dedicated to the use of continental powers. In that sense, after 2001, even distant rivals may be an alternative to Europeans. Yet, today the trivial amount of transatlantic LNG trade does not pose a great threat to security concerns of the EU members.

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[362] Grieco, 1988, *op-cit.,* p. 487.

[363] Norwegian Government Administration Services, 2004, "Sales of Norwegian Produced Petroleum", p. 43, retrieved on 25 May 2010, from http://www.regjeringen.no/upload/kilde/oed/bro/2004/0006/ddd/pdfv/204696-factsog0704.pdf; U.S. Energy Information Administration, 2010, U.S. Natural Gas Imports by Country, retrieved on 25 May 2010 from http://www.eia.doe.gov/dnav/ng/ng_move_impc_s1_a.htm.

In short, the Norwegian energy corridor explains very clearly that major European powers are well aware of several facts: (1) energy resources are becoming much more significant than being regarded as an economic commodity; (2) Norwegian resources are currently the most reliable energy resources for Europe and finally (3) getting the greatest share from Norwegian resources will be vitally important in a world where multi-polarity is the characteristic of system's structure.

4.4.2. North Africa: Southern Energy Corridor

As a second corridor providing natural gas to European energy grid, Algeria and Libya has a special importance particularly for the Mediterranean member states of the EU. Although geographically not located in North Africa, Nigeria can also be viewed in this category since the county provides significant amount of LNG to European countries. Among them, Algeria is the most important supplier though it ranks after Nigeria in terms of natural gas reserves in Africa. Algeria's importance is because of its proximity to the European continent. Algeria has more than 4.5 trillion cubic meters (tcm) of proven gas reserves, which represents the tenth largest natural gas reserves in the world. Algeria produced 84 bcm natural gas in 2008 and export more than 2/3 of that production to external markets. Most of this gas is exported to European countries via pipelines, which makes the country the fourth major supplier of Europe after Russia, Norway and the Netherlands.[364]

Libya, on the other hand, has lower natural gas reserves when compared to Algeria. However, Libya has the largest proven oil reserves in Africa. More than 80 percent of the oil Libya produced is transported to European countries leaded by Italy and Germany. Libya's natural gas reserves are expected to reach slightly above 1.5 tcm which is almost equal to Egypt in the region. Natural gas exports to Europe have grown considerably over the past five years through the 370-mile 'Greenstream' underwater natural gas pipeline from Melitah in Libya to Gela in Sicily, which carries 10 bcm annually.[365]

[364] Country Analysis Briefs: Algeria, U.S. Energy Information Administration, June 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Algeria/pdf.pdf., pp. 1-7.
[365] Country Analysis Briefs: Libya, U.S. Energy Information Administration, September 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Libya/pdf.pdf., pp. 1-8.

Finally, as one of the other major oil and gas producer in Africa, Nigeria can be evaluated as a part of this southern energy corridor to Europe. Nigerian natural gas reserves are expected to be more than 5.2 tcm, which is greater than Algerian reserves. Nigeria provides Europe 10 bcm of LNG annually, which has generally been destined to Spain, France and Portugal.[366] Although Nigeria has high energy reserves, certain security problems concerning the assaults on oil extraction and transportation possibilities and cost of transportation via tankers in the form of LNG decreases the importance of Nigeria as a reliable partner in solving the diversification problem of Europe.

In short, North African energy corridor in the south of Europe is an important source of energy since it helps the diversification problem and provides convenient and affordable natural gas. However, the resources are less than the necessary amount that Europe requires if the major continental powers expect a global role in a future multi-polar international structure. In other words, Europeans should continue to pay considerable attention on Africa, yet has to engage in other energy regions as well.

4.4.3. Russian Corridor

The situation of Russia as a supplier of natural gas is quite different from Norwegian corridor. In the case of Norway, the European powers have generally competed with each other for taking the highest part of the potential reserves. However, several other factors should be taken into consideration when Russian supplies are considered. First of all, it should be reminded that Russia is the primary gas supplier of Europe. Secondly, the continental countries are more dependent on Russian gas than Russia's dependence on the gas sales to the European customers. Furthermore, Russia is a great power with certain interests and expectations at foreign policy level which may necessitate cooperating with major European powers. Last but not least, Russia may have an indirect influence on Caspian region, which has long been regarded by the Europeans as an important source of alternative hydro-carbon energy. These factors generally shape the energy relations between Russia and Europe, therefore, a detailed analysis of this relationship is necessary for this study.

[366] Country Analysis Briefs: Nigeria, U.S. Energy Information Administration, July 2010, retrieved 24.11.2010 from http://www.eia.doe.gov/emeu/cabs/Nigeria/pdf.pdf., pp. 1-8.

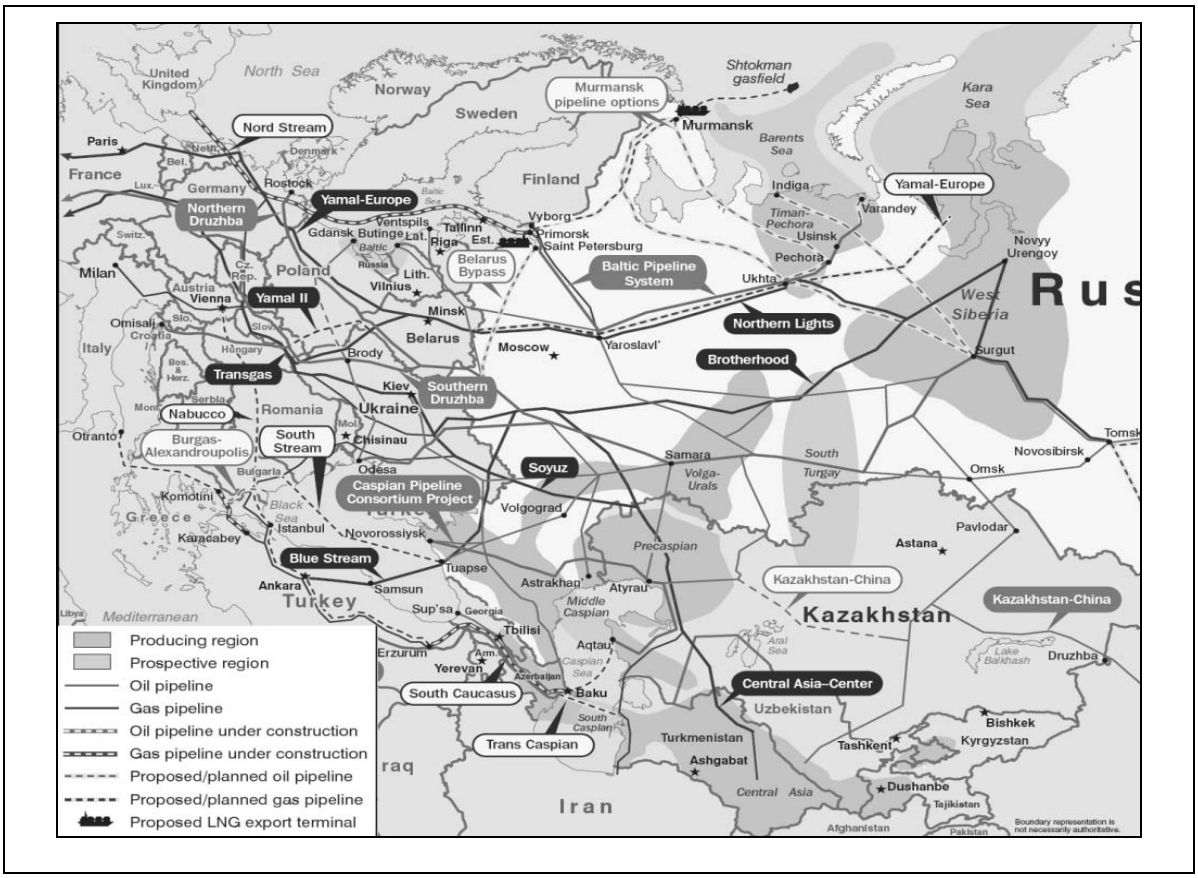
4.4.3.1. Russia: The Main Supplier of Europe

It is not plausible to investigate any policy behavior without taking Russia into account as far as energy resources are considered, because Russia holds the world's largest natural gas reserves, the second largest coal reserves and the eight largest oil reserves.[367] With almost 50,000 bcm capacity, Russian natural gas reserves are almost equal to the total of following two countries' reserves: Iran and Qatar.[368] With those gigantic reserves, Russia is the world's largest producer and exporter of natural gas as well. There are more than 75 gas fields in Russia with reserves over 100 bcm. The biggest one is Urengoy gas field with reserves equal to more than one-fifth of total natural gas reserves in Russia. As it is clearly shown in Map 4.1, most of the greatest natural gas fields of Russia are located in West Siberia Basin and arctic coast of Northern Russia. Urengoy and Yamburg gas fields which constitute more than one-third of the Russia's natural gas reserves are located within these regions. In addition, Barents Sea and Kara Sea are the most important offshore fields of Russia. Among these fields, Urengoy is the oldest field. It was discovered in 1966 and production started in 1978. Since 1984, Urengoy gas has been exported to Western Europe through the Urengoy–Pomary–Uzhgorod pipeline.[369] Also known as Trans-Siberian or Brotherhood pipeline, it runs from Siberia's Urengoy gas field to Uzhgorod in Western Ukraine. Then, it goes mainly through the Ukrainian border with Slovakia and to smaller pumping stations on the Hungarian and Romanian borders.[370] Therefore it has been the main 'gas vein' of Europe for a very long time. Northern Lights pipeline, also built in 1960s, carries natural gas from Urengoy gas fields to Northern Europe via Belarus. In addition to these earlier pipelines, new pipelines has been planned and built after the end of the Cold War. Particularly, Russian efforts to develop the reserves in Yamal peninsula have started in 1980s.[371] Yamal peninsula and the Barents Sea have become an important

[367] Russia: Background, 2009, U.S. Energy Information Administration, retrieved on 25 December 2009 from http://www.eia.doe.gov/cabs/Russia/Background.html.
[368] Worldwide look at reserves and production, 2007, *Oil & Gas Journal,* Vol. 105, No: 48, pp. 24-5.
[369] Wüst, Christian, 2007, "How Long Will Siberia's Gas Last?", *Der Spiegel,* 12.18.2007, retrieved on 15 September 2010 from http://www.spiegel.de/international/world/0,1518,524140,00.html.
[370] The Urengoy – Pomary – Uzhgorod Pipeline: a Cold War pipeline, *Pipelines International,* retrieved 15 September 2010 from http://pipelinesinternational.com/news/the_urengoy_pomary_uzhgorod_pipeline_a_cold_war_pipeline/043753/.
[371] Reagan Administration opposed strongly to this pipeline since it increased the dependence of European allies to Soviet Union even by sanctioning certain European companies. However, the Europeans were seriously concerned about their energy needs and concluded agreement with the Soviets despite the American

part of the Russian gas sector after 1990s. It is estimated that one third of the gas reserves of Russian federation is located in these areas.[372] Therefore, the current Russian development projects as well as future prospects are concentrated on the Yamal Peninsula and the Barents Sea. Yamal - Europe pipeline was built to export Yamal gas to Europe,

Map 4.1. Russian Natural Gas Fields and Pipelines to Europe



Source: Energy Information Administration, http://energy-eng.blogspot.com/2009_01_01_archive.html

which also connects to Urengoy gas in Ukhta. By this way, the amount transferred to Germany through Belarus-Polish corridor has reached to 33 bcm annually.[373]

The ownership of these gas pipelines should also be mentioned in order to make an analysis. According to EIA, "Kremlin policy makers continue to exhibit an inclination to

efforts. See, Lewis, Paul, 1982, "U.S. asks its allies to deny the Soviet parts for pipeline", *The New York Times,* January 11, 1982, Section A, p.1, c.4.

[372] Yamal Megaproject, *Gazprom, retrieved* 15 September 2010 from http://gazprom.com/production/projects/mega-yamal/.

[373] Yamal-Europe, *Gazprom*, retrieved 15 September 2010 from http://gazprom.com/production/projects/pipelines/yamal-evropa/.

advance the state's influence in the energy sector."[374] All of the Russian fields are owned and all the pipelines are operated by Gasprom. Moreover, taxes on oil exports and extraction are high, and Russia's state-influenced oil and gas companies continuously works for obtaining the controlling stakes in most of the previously foreign-led projects.[375]

With the immense capacity of natural gas production and ownership of routes to Europe, Russia has become the most important energy provider of European countries. As it was clearly depicted in detail in Chapter 2, almost all major powers in Europe are dependent on Russian gas. Furthermore, most of the Central and Eastern European Countries are almost totally dependent on Russian natural gas. From this point of view, an unexpected shortage would cause very serious consequences for the European countries as the cases of Ukraine and Belarus have clearly shown. In turn, the Russian economy has also benefitted much from natural gas sales to Russia. Therefore, there is interdependency between Europe and Russia. In order to overcome further disruptions caused by transit countries, Russia agreed to build Nord Stream Pipeline directly goes to Germany under Baltic Sea at a cost of 7.4 billion Euros[376]. However, the Europeans are more vulnerable in this relationship since Russians can find alternative buyers such as China and/or India while Europeans cannot easily find an alternative to Russia.

Despite having various alternative oil producers, Russia has also been the main oil supplier of the continental Europe. Druzhba (Friendship) Pipeline carries 1.4 million barrels per day from Eastern Russia and Siberia to Belarus, Poland and Germany in the

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[374] Russia: Background, *op-cit.*

[375] Depsite the privitization efforts during Borris Yeltsin's Presidency, government control over this gigantic company reaffirmed by the Putin reforms in 2000-2003. See Pala, Cenk, 'Ayı ile dans: Kutsal Gazprom İmparatorluğu ve Türkiye' in Tanyeri, Süha (ed.), *Dördüncü Uluslararası Sempozyum Bildirileri: Güvenliğin Yeni Boyutları ve Uluslararası Örgütler*, Ankara: Genelkurmay Askeri Tarih ve Stratejik Etüt Başkanlığı Yayınları, pp. 12-8.

[376] This amount only covers the offshore part of the project. There are also onshore costs which covers the construction on Russian and German territories, which is estimated to total around 6 billion Euros. See: Dempsey, Judy, 23 August 2007, "Gazprom plans to re-route controversial European pipeline", *The New York Times, retrieved on 17 March 2010 from http://www.nytimes.com/2007/08/23/world/europe/23iht-pipeline.4.7231553.html?_r=1.* Moreover, there are discussions about an increase in the costs of the project by 1.4 billion Euros. See: Nord Stream More Expensive, *Barents Observer,* retrieved on 17 March 2010 from: http://www.barentsobserver.com/nord-stream-more-expensive.4760460-116321.html. The constructing company on the other hand, refuses these arguments and expected the costs to be as planned before. See: Nord Stream Project's Cost Remain 7.4 Billion Euros, *Nord Stream,* retrieved on 17 March 2010 from: http://www.nord-stream.com/en/press0/press-releases/press-release/article/nord-streams-project-costs-remain-74-billion-euros.html?tx_ttnews[backPid]=1&cHash=cf362f2cf9.

north. This pipeline carries oil to Ukraine, Hungary, Slovakia and Czech Republic in the south as well.[377] Russian ports in Primorsk near St. Petersburg and Novorossiysk in the Black Sea are also important oil transfer points to Europe.[378] In short, although not being as much decisive as in the case of natural gas, Russia is also an important source of imported oil for Europe. In such an extensive relationship, European countries are highly dependent on Russia as far as energy supplies are considered. On the other hand, Russia is also dependent on European buyers particularly in natural gas sales. Therefore, before a structural analysis of interdependency, the alternatives of both consumer side and supplier side should be clearly examined in order to understand the how fragile the parties are.

4.4.3.2. Alternative Destinations for Russia to Export Energy Resources

It is very clear that the European Union and Russia are extremely interdependent with respect to their energy trade.[379] As Walt argues, "the end of Cold War altered many key features of world politics, but it did not affect the essential nature of the international system"[380], which is characterized by a condition of anarchy. Moreover, "each state has a different endowment of resources, a unique geographic location, and its own particular history, each inevitably has somewhat different preferences on most issues"[381]. Under these conditions, being highly dependent on another country is not something desirable for a state in an anarchic world order. In more concrete words, major EU powers may find it undesirable to rely heavily on Russian energy sources because Russia may change its policy towards European countries based on its own interests. Similarly, Russians may not prefer to be so much dependent on the sales to European markets and may prefer finding new energy markets for their gas and oil. There are some alternatives both for Russia and Europe in order to alleviate the pressures that the energy interdependence put on them.

As for the Russian side, the growing economies of China and India emerge as new energy markets. The Chinese efforts to meet the growing energy demand include energy

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[377] Druzhba Pipeline, *2009, Pipelines International,* retrieved 17 March 2010 from http://pipelinesinternational.com/news/druzhba_pipeline/008045/.
[378] Oil exports, 2009, U.S. Energy Information Administration, retrieved on 25 December 2009 from http://www.eia.doe.gov/emeu/cabs/Russia/Oil_exports.html.
[379] Borisocheva, Ksenia, 2007, *Analysis of Oil-and Gas-Pipeline-Links between EU and Russia*
[380] Walt, 2005, pp. 71-3.
[381] *Ibid.*, pp. 71-3.

cooperation with major suppliers. China is also investing heavily in Russian energy assets.[382] Russia accounts for about 10 percent of Chinese oil imports, which is largely sent by railway transportation. The current amount of China's natural gas imports from Russia, on the other hand, is very trivial.[383] In line with the growing relations between the two former communist countries, some analysts expect a growing energy relationship between these two major powers as well.[384]

From a neo-realist point of view, the slowly growing relations can be understandable. Since these two major powers have a long border, they may be more anxious about each other's intentions and therefore reluctant to engage in a high level of cooperation. Since the American power is an offshore threat for both Russia and China, developing relations cautiously with closer rivals may be more important than balancing the United States. As some analysts argue "major Eurasian powers will be too busy competing against each other to worry about the United States, and will want to enlist it as an ally against their regional rivals".[385] In line with this argument, Downs contented that "Russia became increasingly reluctant to commit to deeper energy integration with its neighbor to the south in large part because of the intersection of fears about China's rise with the role that energy exports play in Russian foreign policy and domestic politics."[386] Russia's move to change route of the Eastern Siberia – Pacific Ocean pipeline to end in Russia's eastern coasts is in conformity with this argument. That pipeline was originally agreed between Russia and China to end in Daqing in China. However, Russia preferred not to direct those resources solely to use of China.[387] From this point of view, Sino-Russia cooperation may require

[382] The China National Petroleum Corporation (CNPC) has recently announced its investment of $500 million in Rosneft, Russia's leading Oil Company. See, John, Mary, 2006, "Russia-China Energy Cooperation", *Frost & Sullivan,* retrieved on 25 May 2010 from http://www.frost.com/prod/servlet/cif-econ-insight.pag?docid=76385988.

[383] In 2006, Chinese officials signed a Memorandum of Understanding (MOU) with Russia's Gazprom for two pipeline proposals that could send natural gas supplies from Russia's Far East in the next decade. See, China: Natural Gas, 2009, *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/China/NaturalGas.html.

[384] Ferdinand, Peter, 2007, "Sunset, sunrise: China and Russia Construct a new relationship", *International Affairs,* Vol. 83, No:5, pp.841-867.

[385] Layne, Christopher, Layne, Christopher, 2006, "The Unipolar Illusion Revisited: The Coming End of the United States' Unipolar Moment", *International Security,* Vol. 31, No:2., p.22.

[386] Downs, Erica S, 2010, "Sino-Russian Energy Relations An Uncertain Courtship," in James Bellacqua (ed), *The Future of. China-Russia Relations*, Lexington: The University Press of Kentucky, pp. 146-7.

[387] Sevastyanov, Sergei, 2005, ""The Russian Far East's Security Perspective: Interplay of Internal and External Challenges and Opportunities", *Slavic Research Center,* Proceedings of the Conference: Siberia and the Russian Far East in the 21st Century: Partners in the 'Community of Asia', Sapporo, pp. 27-9.

much time and effort to develop into an intensive cooperation level. In other words, China may not easily substitute European countries in terms of energy partnership.

Furthermore, to build new infrastructure to China may cost so much that Russia may refrain from spending that amount of investment. Considering the Russia's problems in extracting new energy fields in Northern Siberia and Yamal Peninsula because of the necessary investment required for production, it may be irrational to build long pipelines to Chinese border. Therefore, China may hardly become an alternative for European gas market from the Russian perspective.

Another alternative of Russia to export natural gas may be India. However, the natural gas relations with India are not as promising as trade with China because Indian plans for future gas imports are based on two main other producers: Iran and Turkmenistan. As for the Iranian gas, the security of route passing through Pakistan is a serious concern for Indian authorities. In addition to this, the price of the natural gas may be an important impediment against a deal between these two countries. Similar security concerns are also relevant for Turkmen gas since the pipeline will pass over Afghanistan and Pakistan. Moreover, the adequacy of Turkmen gas for the Indian market is another question that New Delhi concerns with.[388] In light of this, Russia may still rise as an alternative to Indian market. However, the main problem is that Russia has no border with India and the pipeline should pass some other countries. Such a project may not only cause an extra transportation cost, but also entails several security problems similar to the crisis between Russia and Ukraine. Furthermore, the construction cost of such a project is also dissuasive for both countries. Therefore, as a potential buyer of Russian natural gas, India seems to have even less probability than China.

As the relations between Russia and its southern neighbors in Asia confirm, Europe still emerges as the best and most reliable partner for Russia's enormous energy trade. In addition to the economic benefits of this trade, from a system level analysis, it can be argued that both Russia and European major powers may also have a chance to balance the American power by improving their energy relationship in the near future.

[388] India: Natural Gas, 2009, *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/India/NaturalGas.html.

4.4.3.3. Europe's Alternative Energy Resources to Russia

The European Union members have also some alternatives to Russia in order to provide hydro-carbon energy resources. Actually, alternative import routes cannot totally substitute Russian resources, yet they may only help to decrease the level of dependency on that country. From this point of view, North Africa, the Middle East and Caspian Basin emerge as alternative regions for Russian energy supplies. Currently, European countries, particularly southern countries have a possibility of direct access to North African resources as mentioned before. Unfortunately, the North African reserves are not enough to feed the energy requirement of central European countries. Access to natural gas produced in other parts of the world in form of LNG, on the other hand, is not very feasible due to cost of transportation and process of gasification and liquefaction.

As for the Middle East and Caspian Basin, the European countries have important trade relations as far as oil is considered. However, these two regions have also significant natural gas reserves. For example, South Pars region, which is the second largest natural gas field in the world, is located between Iran and Qatar with considerably high offshore reserves in the Persian Gulf.[389] In addition, Saudi Arabia and Iraq have also considerable level of natural gas reserves which may be transferred to Europe either via pipelines or in the form of LNG.[390] In addition to reserves in the Middle East, Caspian Basin is also considered as an important source of energy.[391] The level of total oil reserves in the Caspian region is expected to be equal or more than the North Sea reserves. Natural gas reserves, on the other hand, are expected to be around 5 percent of total global gas

[389] World Energy Outlook, 2008, *Head of Communication and Information Office,* Paris: International Energy Agency, p.298.
[390] EIA, 2009, "Saudi Arabia: Natural Gas", *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/Saudi_Arabia/NaturalGas.html; [390] EIA, 2009, "Iraq: Natural Gas", *U.S. Energy Information Administration Country Analysis Briefs,* retrieved on 28 May 2010 from http://www.eia.doe.gov/cabs/Iraq/NaturalGas.html.
[391] According to the International Energy Administration, the region has a total of 125 million toe of oil as well as 147 million toe of natural gas production. See 2007 Energy Balance for Caspian Region, *International Energy Administration,* retrieved on May 21, 2010 from http://www.iea.org/stats/balancetable.asp?COUNTRY_ CODE=32.

reserves. In other words, most of the major powers are interested in Caspian region because of the huge reserves of gas and oil.[392]

However, current development efforts in Caspian countries are mainly faced with two serious difficulties: Firstly, the production of oil and gas resources is naturally subject to the availability of transportation facilities. Since Caspian region is a landlocked area, pipelines constitute indispensable part of the production. However, the old Soviet infrastructure is not capable and reliable for carrying natural gas to Europe. Furthermore, building new pipelines requires huge amount of capital as well as a consensus among many different parties including states, multinational corporations and even individuals. Second difficulty against the Caspian development efforts is the legal status of the Caspian Sea. Littoral states still cannot agree on the status of Caspian Sea which inhibits the resource development efforts.[393] Without providing an agreement among Iran, Russia, Turkmenistan, Kazakhstan and Azerbaijan, it will not be possible to present Caspian energy resources to the world markets.

4.4.3.4. Energy Dependence of Europe on Russia and its Consequences

As it is figured out above, European countries are highly dependent on Russian energy resources. There are alternatives for decreasing the level of dependency, yet it is almost impossible to substitute Russia with any alternative energy rich region. From this point of view, European countries should follow stable relations with their eastern neighbor. However, it will not be an exaggerated argument to label the European-Russian energy relationship as a process of mutual-interdepence.[394] Russia would hardly find an alternative

[392] For U.S. and U.K.'s official reports about the reserves in Caspian basin, see Gelb, Bernard A., 2006, "Caspian Oil and Gas: Production and Prospects", Congressional Research Service Reports for Congress, Washington D.C.: The Library of Congress; Winstone, Ruth and Young, Ross, 2005, "The Caspian Basin, energy reserves and potential conflict", Research Paper 5/24, London: House of Commons Library.

[393] For a detailed analysis of the problems between the Caspian states, see Mahnovski, Sergej, 2009, "Natural Resources and Potential Conflict in the Caspian Sea Region", in Oliker, Olga and Szayna, Thomas S., *Faultlines of Conflict in Central Asia and the South Caucasus,* Pittsburg: Rand, pp. 109-144.

[394] Mutual interdependence is not used as defined by interdepence liberalist writers. For example, some liberal scholars argued that states become more preoccupied with low political issues in complex interdependence and transnational actors are becoming more important. See: Nye, Joseph, 1993, *Understanding International Conflicts,* New York: Harper Collins, pp. 169-70; Keohane, R.O. and Nye, J.S., 1977, *Power and Interdependence: World Politics in Transition,* Boston: Little Brown, pp. 24-7. However, the mutual interdependence in energy between European countries and Russia shows a different feature. Russia does not have a very transparent administration as described in liberal thinking. Therefore, the interdependency between Russia and Europe is mainly limited to energy fields.

to Europe for its natural gas production as defined above. However, it is clear that the destructive impact of any energy crisis between Russia and Europe would be greater on European people than its impact on Russia's economy.

A systemic analysis of this dependency relationship between European countries and Russia may help to understand the policies of these countries. First of all, one should always remember that both Russia and major European powers are potential great powers that may turn into rivals against each other in the future. This does not only mean that Europeans may conflict with Russians, but there may be internal conflict among European Union members. Therefore, the relationship among these powers will always include suspicion and unreliability. In other words, anarchy is a persistent condition that cannot be transcended, and states are in a perpetual struggle for controlling over territory and getting the maximum portion of scarce resources.[395] This systemic pressure clearly shows the limits of cooperation between great powers. As long as their interests are not conflicted great powers may cooperate at a certain extent. The energy cooperation between Russia and European powers, thus, is a result of the systemic pressure. As explained in Chapter I, great powers are expected to engage in balancing against an aspiring hegemon and try to limit its military and economic capabilities.[396] In line with this argument, it can be asserted that the increasing U.S. hegemony[397] within the international political system requires others to take precautions for defending themselves against any potential hegemonic threat.[398] From this point of view, Europe's increasing cooperation with Russia may be evaluated as a part of this intrinsic balancing behavior against American dominance. Former Russian President Putin openly argued the need for multi-polarity for several times and it is argued that the former superpower has been seeking for a grand Euroasian alliance

[395] Schweller, Randall L (1999)., "Realism and the Present Great Power System: Growth and Positional Conflict Over Scarce Resources", in Kapstein, Ethan B and Mastanduno, Michael (eds.), New York: Colombia University Press, pp. 28-30.
[396] Levy, Jack S., 2004, "Why Do Great Powers Balance Against ana When?" in Paul V.T, Wirtz, James J. and Fortmann, Michel, *Balance of Power: Theory and Practice in the 21st Century*, Stanford: Stanford University Press, pp. 38-9.
[397] Although the US implements unilateral policies that may help to construct a hegemony in international system. However, being the most powerful actor does not entail being the hegemon since others do not comply with all the US decisions and there are economic shortfalls of the US that may jeopardize its strength. See: Ayman, 2008, p.55.
[398] There was a solid enemy during the Cold-War. In the current structure, on the other hand, there is no precise criteria to distinguish opponents from allies. See: Ayman, Gülden S., 2007, "Turkish-American Relations and the Future of Iraq", *Private View*, No:12, p. 66.

against U.S. unipolarity.[399] Therefore, Russia should be evaluated as a country which is trying to balance the hegemon in a modest way. From this point of view, developing special relations in energy field with a country which depicts balancing efforts may also be evaluated as a support for balancing. Put differently, European efforts to develop special relations with Russia in energy field may help Russia in its balancing efforts. However, it is not very simple to determine whether European countries support Russia's balancing efforts or not.

In order to make an accurate analysis, it may be helpful to examine whether Europeans conduct special relations with Russia in spite of a clear opposition from the U.S., or not. In other words, if Europeans insist on intensive relationship with Russia while the United States suggests Europeans certain alternatives to Russian natural gas and oil, then this would be regarded as a hidden support for Russia's balancing efforts. In contrast, if the U.S. does not present any alternative to Russian resources, European efforts to develop special energy relations with Russia may be evaluated as a solution to the obvious need for energy resources. In that sense, the United States has not put a viable alternative energy resource that Europe may resort for decreasing the energy dependency on Russia. There are several potential areas that the U.S. may present Europeans as alternative energy resources, yet U.S. is not so eager to let Europeans directly benefit from those resources.

Firstly, Iraq has considerable gas fields both in the north and south of the country.[400] Although the current level of Iraqi gas is not as promising to become an alternative to Russia by its own, it would help Europe to be less dependent on Russia. Although some of the European based energy companies try to operate in Iraqi fields[401], most of the Iraqi oil and gas resources are controlled by the companies from other countries. Very recently, new contracts are signed with companies from Kuwait, Turkey and Korea for the

[399] Wohlforth, William, 2004, "Russia's Soft Balancing Act" in Ellings, Richard J., Friedberg, Aaron L. and Wills, Michael, *Strategic Asia 2003-04: Fragility and Crisis*, Seattle: National Bureau of Asian Research, pp. 165-8.

[400] The estimated natural gas reserves of Iraq is slightly more than 3 trillion cubic meters and Irak ranks 10th at worldwide as far as largest natural gas reserves are considered. See: Iraq: Natural Gas, 2010, US Energy Information Administration, retrieved on 26 September 2010 from http://www.eia.doe.gov/cabs/Iraq/NaturalGas.html.

[401] Royal Dutch Shell, BP, Total of France and ENI of Italy have particular attention on Iraqi natural gas. However, they are in strict competition from Asian and American companies. See: Hafidh, Hassan, 2010, "Iraq Plans New Licensing Auction for 3 Gas Fields", *Rigzone,* retrieved 25 June 2010 from http://www.rigzone.com/news/article.asp?a_id=91047.

Mansouriya and Siba gas fields.[402] Secondly, Iran would present a competitive alternative to Russian gas as far as South Pars fields are considered. However, the hard political stance of the United States against Iranian uranium enrichment crisis has urged Europeans to act prudently in developing energy cooperation with Iran. Instead of easing the sanctions, the major EU countries accompany the United States in implementing more sanctions on Iran which may shift the interest of that country to expand its energy ties with Asian countries such as India, China, Japan and Korea.[403] Therefore, strict U.S. policy towards Iran, which pressures Europeans to prefer a hands-off attitude in relations with Iran, compels major European countries to develop special energy relations with Russia.

From this point of view, European preference of rapprochement with Russia in energy issues does not totally confirm the idea of balancing the United States. However, it may also include sentiments of a support for balancing effort. It is even very hard to evaluate European behavior as simply a search of energy security, support to balancing or directly engaging balancing the U.S. power. If the United States followed a constructive policy towards Iran or if the European companies would find more chance in Iraq, major European powers would be less enthusiastic in engaging special relations with Russia.

On the other hand, high-level energy relationship may be a planned consequence of European balancing efforts against the tremendous power of the U.S. Some scholars argue that the second-tier major powers such as European powers, China, India and Russia are already trying to balance the uncontrolled U.S. power in the unipolar world order. In more concrete terms, there are some views that some major powers are currently engage in classic balancing while some other political scientists insist on a new type of balancing as a result of the power gap between the U.S. and others. Some others, on the other hand, argue that the current structure does not let any other power to challenge the U.S. position.[404] In line with these discussions, it can be clearly argued that increasing energy relations with

[402] Ajrash, Kadhim and Razzouk, Nayla, 2010, "Iraq Signs Natural Gas Contracts With Foreign Partners", *Bloomberg Businessweek*, retrieved 14 November 2010 from http://www.businessweek.com/news/2010-11-14/iraq-signs-natural-gas-contracts-with-foreign-partners.html.
[403] Afrasiabi, Kaveh L., 2010, "Europe's Iran sanctions may backfire", *Asia Times,* retrieved on 28 July 2010 from http://www.atimes.com/atimes/Middle_East/LG28Ak01.html.
[404] The newly developed soft balancing concept explains certain behaviors of major powers which entails contradicting policies to the interests of the US. For a detailed analysis of the arguments on balancing, see: Paul T.V., *op-cit.,* pp. 46-71*;* Pape, *op-cit.,* pp.7-45; Art, Robert, et-al., *op-cit.,* pp. 177-196; Brooks and Wohlforth, *op-cit.,* pp. 72-108; Lieber and Alexander, *op-cit.,* 109-139.

Russia is necessary to be relieved from U.S. control. The efforts within the ESDP[405] have been evaluated as a balancing effort through external alignment. Put differently, integrating resources and developing an EU level military structure with the capability of deploying 60,000 troops[406] are important elements of greater defense autonomy which confirm balancing. "A European Union that can act autonomously in its own region and that can provide for its own security is an EU that will be less under the United States' thumb and more capable of influencing Washington across a certain range of issues"[407]. These European efforts complicates transatlantic relations in several ways which gives more agenda-setting power to Europeans. This is not welcomed by the U.S. because it will decrease the ability of U.S. to influence over Europe.[408]

Christopher Layne also puts forward a similar argument. The U.S. may try to shape international atmosphere according to its own interests while curbing other's freedom of action and disregarding their interests. Washington may implement such a policy "especially in regions like Middle East-Persian Gulf where interest of the United States and the second-tier major powers could diverge … The second-tier major powers have strong motivations to engage in semi-hard balancing by building up their own military capabilities"[409]. Art explains the reasons under European balancing behavior with two main factors: Firstly there is an imbalance between the European countries and the United States. Secondly, the European foreign policy has become less relevant to the U.S. foreign policy when compared to the Cold War years.[410] To sum up, the diverging interests of the U.S. and major European powers result in a different mode of transatlantic relations when compared to the Cold-War period. Hard balancing, soft balancing, opaque balancing or semi-hard balancing are some of the labels given by the political scientists. Whatever the name of this new type of behavior, there is a reflexive policy against the American policies in Europe. Therefore, the energy policies at European level should also be considered from

[405] For a detailed study of ESDP development from the view of both politicians and experts, see: Gnesotto, Nicole, 2004, *EU Security and Defense Policy: The First Five Years (1999-2004),* Paris: Institute for Security Studies.
[406] *Ibid.,* p. 179.
[407] Art, *op-cit.*, p. 182.
[408] Posen, Barry R., 2004, "ESDP and the Structure of World Power", *International Spectator,* Vol. 39, No: 1, pp. 15-17.
[409] Layne, Christopher, 2006, *The Peace of Illusions: American Grand Strategy from 1940 to the Present,* Ithaca: Cornell University Press, pp. 146-7.
[410] Art, *op-cit.,* p. 183.

a similar point of view. In other words, European powers do not want to be dependent on any other international actor as far as energy resources are considered. This is the same for what Europeans do in foreign policy. They try to improve their own military resources in order to be relieved from U.S. dominance in security issues. Europeans have initially begun to improve their capabilities under ESDP, which is the most tangible achievement of the military dimension of European integration since the failure of European Defence Community in 1952[411]. The current ESDP achievements have also been perceived differently even among Europeans. Some believe that European security is directly related to Atlantic Alliance and regard the European efforts as redundant while 'continental' view argued that the current military activism of the European integration process is inadequate[412]. It is clear that some of the European countries are severely searching for more freedom in military security.[413] Similarly, Europeans want to be free in energy issues. Moreover, improving relations with Russia may also be regarded as cooperation with other major powers in order to strengthen collective position against the dominance of hegemonic superpower. Therefore, European rapprochement with Russia in energy issues may be evaluated as a part of a soft balancing effort of the continental powers against their Cold-War protector.

However, having intensified energy relations with Russia does not practically mean relying totally on Russian resources because Russia is also not a reliable partner for the Europeans. Since state behaviors are affected from relative positions of the others, it is not logical to trust any other international actor. Balancing behavior is not something peculiar to be implemented solely against the hegemon; there may be several simultaneous regional balancing efforts among medium and small powers.[414] Therefore, as the United States pursues unilateralist strategies to prevent the rise of a peer competitor, other major powers

[411] Teixeira, Nuno Severiano, 2009, "European defence: a future challange", in Vasconcelos, Alvaro de, *What ambitions for European defence in 2020?,* Paris: The European Union Institute for Security Studies, pp.143-4.
[412] *Ibid.,*pp.145-6.
[413] Since the late 1990s, European efforts to have a special military force have worried many American officials for making NATO obsolete. 1999 Helsinki Summit of the EU temporarily defused US concerns by degrading EU forces to NATO by confirming that the Union would only act if NATO decided not to take part as a whole. This declaration "diminished – but did not entirely eliminate – the US fear that ESDP might develop as a rival to NATO. "In the eyes of some US officials, France appeared to have moved from being a cantankerous ally to an outright opponent of US policy." See: Larabbe, *op-cit.,* pp.51-2.
[414] Art, *op-cit..,* p. 184.

normally pursue strategies any other major power to advance in a position of a superpower[415]. Put differently, relying excessively on Russian resources may turn Europe heavily dependent on Russia while Europeans try to relieve from American hegemony. That is why European Commission continuously stresses on the importance of diversification of resources and remarks often on the increasing dependence on Russian gas. In a future multi-polar international structure, major European powers should expect to be independent both from U.S. and Russia in terms of military and energy in order to feel completely secure. As Art explains "balancing has to begin somewhere over something, and balancing takes time, especially when the state against which it is directed has generally been viewed as a benign force and when its edge is so great"[416]. Therefore, it is not so weird to argue that Europe may also be trying to balance Russia as well as the United States. Major European powers support NATO's enlargement eagerly, which shows that European's are not happy with a Russian sphere of influence over the eastern neighborhood of EU territory.[417]

From this perspective, the way European powers evaluate Russia's intentions for engaging in more intensive relations with Europe is also important. First of all, Europeans are already aware of the fact that Europe is the best option of Russia as a market for its natural resources. Its proximity, high consumption level and the ability to pay makes Europe the viable option among others. Russia, on the other hand, does not have a very industrially developed economy except for the trade of natural resources.[418] However, economic sides of certain issues are not the main concern of states for most of the time. Politics generally prevails over economics particularly when energy security issues are considered. The construction of BTC pipeline is the most prominent example of this. From this point of view, political side of the issue is more important than economic aspect of selling energy to Europe for Russia. Therefore, Russia probably perceives Europe as a tool for balancing the U.S. unipolarity. Actually, Russian policy to dominate European energy market may be read from this perspective. By controlling the energy market of Europe, Russia seeks the ability to enforce European governments to engage in balancing in a

[415] Paul, *op-cit.*, p. 46.
[416] Art, *op-cit.* p. 185.
[417] A New Balance in Europe, *The Economist,* 19.11.2009, retrieved 13.02.2011 from http://www.economist.com/node/14915170.
[418] Babalı, Tuncay, 2009, "Turkey at the Energy Crossroads", *Middle East Quarterly,* Vol.16, Iss.2, pp. 27-8.

stronger manner. Being aware of this fact, both the European Commission and member states are in search for alternative energy resources that may help to decrease their dependency on Russian resources. This shows that Europeans are not willing to engage in a traditional balancing against the United States.

On the other hand, the U.S. is aware of the balancing efforts of other major powers. Even though the U.S. has almost all the means that can help to tackle other powers in most of the conflicting issues, the superpower still concerns about preventing the rise of a peer competitor.[419] Particularly growing Chinese economy and resurgence of Russia are probably the main threat perceived by the superpower in current unipolar structure. Certain hegemonic policies, especially with respect to the Middle East and Central Asia, have made some foreign governments anxious. Russia has always perceived Central Asia as its backyard. Therefore, the former superpower does not like U.S. policies in this region. As explained above, United States' traditional allies in Europe are also among those uneasy governments about invasion of Iraq.[420] In such an intricate atmosphere, major European countries have developed a strategic move as a new foreign policy in the new international structure, which includes certain degree of balancing behavior. All European powers, but primarily Germany as the most powerful one, have urged to develop strategic partnership with Russia, which was also mentioned in EU strategy papers for many times.[421] Nevertheless, there is also a tendency to keep Russia at a distance. Put differently, Europeans have drawn their energy policies in line with this new foreign policy, which help them to become more independent at the great energy game.

Paradoxically, the EU members have also engaged a similar balance of power strategy within their internal relations. As explained both in first chapter and the previous parts of this chapter, the internal struggle among EU members to access more energy resources is also a regional balancing behavior. In line with this behavior, member states depict different foreign policies at a certain extend. A group of member states leaded by Germany give importance to develop special relations with Iran. On the other hand, having a strong nuclear infrastructure, France has more space than Germany in energy policy decisions and

[419] Paul, *op-cit.,* p. 46-8.
[420] Art, *op-cit.,* pp. 177-185.
[421] Joetze, Günter, 2006, "Pan-European Stability: Still a Key Task?" in Maull, Hanns W. (ed.), *Germany's Uncertain Power: Foreign Policy of the Berlin Republic,* New York: Palgrave Macmillan, pp. 152-165.

puts more distance to its relations with Iran[422]. Even though they have diverging policies, a common concern for Europe is the lack of energy resources and access to secure energy with affordable prices.

As a consequence, Europe has mainly two alternatives for solving the energy security problem. Firstly, Europe should invest more on renewable energy resources. Secondly, European countries have to deal with other regions which have huge energy deposits. As for the former, Europeans need time and investment to achieve a certain level of contribution to energy requirement. Renewable energy resources are highly critical for the future. However, they are unfortunately not enough to be relieved from the structural pressures of international system. In other words, Europeans have to find new routes that may become alternative to Russian natural gas. Being aware of this fact, EU Commission and member states show their enthusiasm for developing special interest in Caspian and Central Asia. Moreover, they are also interested in Middle East at a lesser extent. There may be two main reasons for paying less attention to the Middle East countries when compared to the Central Asia and the Caspian. First of all, the U.S. has deep interests in this region and the Europeans may not desire any clash of interests with the sole superpower of unipolar world. Secondly, the Middle East is a very difficult region in terms of security. To engage severe commitments in such a war prone region could harm European energy security much more than the current status. Europeans, furthermore, do not have necessary military capability in order to engage even peacekeeping operations in the Middle East while the U.S. have already embarked on wars against Afghanistan and Iraq. Despite the difficulties of the region Europeans still show enthusiasm for energy trade with the regional powers.

The current energy structure defined above clearly indicates, the existing three energy corridors are vitally important for Europe, but insufficient. European countries should open a new energy corridor in order to provide energy security. This has been labeled as forth

[422] The recent project of construction of a new missile defence system under the aucpices of NATO to protect Europe from the threat of a nuclear attack clearly shows French position. In contrast to Turkey's efforts for not directly mentioning Iran as a threat, French president stressed the Iranian uranium enrichment process as a direct threat to Europen security. See: Catty Remarks on Iran chill mood between Turkish PM, French Leader, 22 November 2010, *Hurriyet Daily News,* retrieved 25 November 2010 from http://www.hurriyetdailynews.com/n.php?n=erdogan-continues-row-over-sarkozy8217s-8220cat8221-definition-for-iran-2010-11-22.

corridor[423], which is expected to connect Europe to the resources in Caspian, Central Asia, Iran, the Middle East and eastern parts of the North Africa.

4.4.4. The Fourth Corridor

The fourth corridor concept has been developed long time ago, but the relative significance of this energy corridor has become a subject of discussion particularly after Russia's policy towards Belarus and Ukraine in mid-2000s. European countries have already known the fact that North Sea and Norwegian Sea reserves are in decline and they have shifted their attention on other resources. They mainly concentrated on developing special relations with Russia. However, it was not until Russia used energy policy as a tool of aggressive foreign policy that Europeans have given a special importance to this fourth or as it is also named as southern corridor, which is expected to connect the Caspian, Gulf regions and the Middle East to European energy network. This has also been identified by the European Commission in the framework of the Trans-European energy networks (TEN-E).[424]

There are certain problems with respect to development efforts in Caspian, Persian Gulf and Middle East region. The least problematic among them is the Caspian because the littoral states have already engaged development efforts within their undisputed territorial waters and on the onshore areas. Among them, Azerbaijan has started to pump oil and gas via BTC and BTE pipelines. As of January 2010, Azerbaijan's proven oil reserves are estimated at 7-9 billion barrels which approximately equals to 1-1,25 billion tones of oil. Today Azerbaijan exports more than 40 million tons of oil annually through pipelines to world markets. Almost 80 percent of Azerbaijan's production comes from Azeri Chirag Guneshli (ACG) fields in Caspian offshore sites of the country and around 90 percent of this oil is transferred through BTC pipeline.[425] Azerbaijan has also produced natural gas from the same ACG and Shah Deniz fields. Azerbajian's total annual natural gas

[423] Energy Corridors: The European Union and Neighbouring Countries, 2007, *European Commission Directorate for Research,* Luxembourg: Office for Official Publications of the European Communities, pp. 22-6.
[424] Report From Commission to the European Parliament, the Council, The European Economic and Social Committee, and the Committee of the Regions on the Implementation of the Trans-European Energy Networks in the Period 2007-2009, 04.05.2010, COM(2010)203final, *European Commission,* Brussels.
[425] Azerbaijan: Oil, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Azerbaijan/Oil.html.

production is 16.5 bcm, 10.5 bcm of which is consumed in internal energy market. Most of the rest is exported to Turkey via South Caucasus Pipeline (BTE). Only less than one sixth of the Azeri gas exports are transferred to Russia and Iran through Gazi-Magomed-Mozdok and Baku-Astara pipelines respectively. Before the extraction in Shah Deniz, Azerbaijan was a net importer of natural gas. In 2006 production started and Azerbaijan has become one of the important natural gas producers in the region. It is estimated that Azerbaijan has roughly 990 bcm of natural gas reserves, which lasts more than 60 years with the current production level.[426]

Turkmenistan is another energy rich country particularly with large natural gas reserves. Annual Turkmen oil production level is slightly less than 10 million tons of oil, which is equal to only a quarter of Azeri production. With 600 million tons of oil, the proven reserves of Turkmenistan are also less than Azerbaijan. On the other hand, Turkmenistan has considerable level of natural gas reserves. Although the annual production level changes because of the lack of infrastructure and extraction capabilities, the country has around 2.6 tcm of natural gas reserves.[427]

Another major oil and gas producing actor in the region is Kazakhstan with 30 billion barrels of reserves which equals to more than 4 billion tons of oil. This means that Kazakh oil fields are four times greater than Azeri reserves. Interestingly slightly more than half of the oil reserves in Kazakhstan are located in onshore fields such as Tengiz, Karachaganak and Aktobe. The Kashagan and Kurmangazy offshore fields have also large reserves. As a result of having large onshore reserves, unlike other littoral states, Kazakh government has the ability to produce more oil without considering the problem of the status of Caspian. Currently, Kazakhstan produces 80 million tons of oil annually. The internal consumption is one-sixth of the production while the rest is exported through pipelines to the ports in Black Sea via Russian territory. Kazakh oil is also transported by tankers and pipeline to Mediterranean via Azerbaijan and Turkey. Kazakhstan also sells certain amount of oil to China through pipelines, which constitutes 1/8 of the current production. When the production starts in Kashagan field, which is estimated to be the largest oil field outside the

[426] Azerbaijan: Natural Gas, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Azerbaijan/NaturalGas.html.
[427] Turkmenistan Eneregy Profile, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=TX.

Middle East, the current oil production will at least expected to double in 2020.[428] Kazakhstan has also significant amount of natural gas reserves, which is almost equal to 2,4 tcm. In other words, although less than Turkmenistan's reserves, Kazakhstan has great natural gas fields which is expected to be exported sooner than Turkmenistan. The Karachaganak gas field, which constitutes almost half of the total Kazakh reserves, provides more than half of the current production level of the country. As of 2008, the natural gas production of Kazakhstan is about 30 bcm which is expected to double before 2015 due to the construction of new development facilities as well as export pipeline routes. In that sense, Kazakhstan currently has two main pipeline routes, one to the west, the other to the south. Central Asia Centre pipeline carries Kazakh production to the Russian border and feeds the Russian natural gas grid. The newly designed Central Asia Gas Pipeline crosses at the southern border of Kazakhstan and carries Turkmen, Uzbek and Kazakh gas to Xinjiang in Chinese border. This new pipeline has a capacity to carry 40 bcm annually, which is expected to realize at the end of 2014.[429]

All these three Caspian countries have significant amount of hydro-carbon resources. Particularly they have almost 6 tcm of natural gas which cannot be neglected in an age of energy war. However, as the current figures shows, there are alternative buyers who are willing to purchase the natural gas produced in the Caspian region. Put differently, Europe should not view Caspian basin resources as taken for granted since there are competitors such as China and Russia. From this point of view, other energy producers who have sufficient resources should be taken into consideration in order to help the fourth corridor to function properly and efficiently. Among these alternative actors, Iran takes precedence over all others because of its gigantic reserves in the South Pars region.

With the gigantic oil and gas reserves, Iran should be regarded as an indispensable element of European energy security. Iran is the second largest oil producer and fourth largest oil exporter in the world. The country has almost 10 percent of the world's total oil reserves that equals to slightly more than 18 billion tons of oil reserves, most of which is located in Iraqi borders of the country. This is important because proximity to Europe is an

[428] Kazakhstan: Oil, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Kazakhstan/Oil.html.
[429] Kazakhstan: Natural Gas, 2010, *US Energy Information Administration*, retrieved on 24.11.2010, from: http://www.eia.doe.gov/emeu/cabs/Kazakhstan/NaturalGas.html.

advantage. Iran's total annual production is about 200 million tons which is almost five times greater than Azerbaijani oil production. Despite its large reserves and proximity to Europe, more than half of the Iranian oil is destined to Japan, China, India and South Korea.[430] As in the case of oil, Iran has the second largest natural gas reserves in the world. It is estimated that Iran has 30 tcm natural gas dispersed mostly in the western costs of the country, such as: South and north Pars, Kish, Kangan-Nar. More than two-thirds of the gas, on the other hand, is non-associated and have not been developed yet.[431] In other words, these resources will be an important element of a future energy competition between major powers. Iran produces more than 110 bcm natural gas annually and consumes more than that amount, most of which is used in re-injection in oil development industry, heating and energy production.[432] Currently, Iranian buy-back regime makes it very costly for foreign operators to engage in Iranian gas fields.[433] Together with these development problems, Iran does not have sufficient infrastructure for transporting its natural gas reserves. The Iran-Turkey Pipeline is the most prominent export route which has a capacity to transfer 14 bcm annually. Other than this line, integrating an Iranian part to Nabucco and a proposed India-Pakistan-India pipeline are also important projects that may help Iran to export natural gas in the future.[434] However, the Indian position in project is not very clear since India has political problems with neighboring Pakistan.[435] Whatever the current Indian decision is, Iranian oil and gas will always attract the countries in the sub-continent. In

[430] Country Analysis Briefs: Iran, 2010, *US Energy Information Administration,* retrieved on 25.11.2010 from: http://www.eia.doe.gov/emeu/cabs/Iran/pdf.pdf , pp. 1-7.
[431] *Ibid.,* pp. 7-9.
[432] Iran exports natural gas to Turkey and imports from Turkmenistan and Azerbaijan. Latest cuts in gas supply to Turkey from Iran were related to the increasing demand in Iranian domestic market due to hard winter conditions. See: Cold halts Iran gas exports to Turkey, 8 February 2008, Reuters, retrieved 25.11. 2010 from: http://uk.reuters.com/article/idUKL0881580820080208.
[433] Iran enforces foreign investors to sell the gas the operator produced to the national gas company of Iran and then that national company sells this gas with a profit again to the same producer, which is naturally not very profitable for the operating company. See: Townsend, David, 2001, "The buy-back debate", *Petroleum Economist,* Vol.68, Iss.9, pp.26-7.
[434] With an envisaged capacity of 55 bcm annually, such a pipeline would be decisive in determining how future Iranian gas will be shared. See: Haider, Zeeshan, 2010, "Pakistan, Iran sign deal on natural gas pipeline", *Reuters,* retrieved on 25.11.2010 from http://uk.reuters.com/article/idUSTRE62G12C20100317?sp=true.
[435] This also confirms the central question of this study. As a result of structural pressure on India, the Indian foreign policy makers perceived it unsafe to rely on Pakistan since they are competing major powers in the same region. Giving the energy card to Pakistan would harm the foreign policy of India. See: India has Quit Iran gas pipeline deal, 2009, *The Times of India,* Retrieved on 25.11.2010 from http://timesofindia.indiatimes.com/news/business/international-business/India-has-quit-Iran-gas-pipeline-deal-Report/articleshow/4980241.cms.

short, Iranian resources should be clearly evaluated by the European powers if they really want to assume a great power status in the post unipolar world order.

Together with Iran, Qatar is the other partner of South Pars field[436], which contributes these two countries to possess the second and third largest gas reserves in the world, respectively. Put differently, Qatar has more than 25 tcm of natural gas reserves, while oil reserves of the country is not so promising. When compared with other Gulf countries, Qatar's oil fields are very trivial.[437] However, Qatar produced 76 bcm in 2008 which is five times higher than 1995. With this figure, Qatar may also become an important part of European energy security together with Iran. Qatar exports natural gas generally in the form of LNG. Among the LNG trade partners South Korea, Japan and India ranks among first three. Among major European powers, only Spain has a considerable level of LNG trade with Qatar.[438] Having tremendous gas resources, Qatar should not be disregarded by the European countries since they are trying to diversify their energy suppliers.

Another important country of the Middle East is Iraq, which has also had very rich oil and gas resources since the early 20th century. The estimated Iraqi proven oil reserves is around 15,5 billion tons, which may go up to 28 billion tons of oil when the unexplored western and southern deserts are considered. Therefore, today Iraq has the fourth largest oil reserves, but may become the second after Saudi Arabia if the under-developed regions are carefully explored. In 2009, Iraqi oil production was 120 million tons, which is a relatively restricted production level.[439] There are two main reasons of below-capacity production: Firstly, the war in Iraq destroyed most of the production and transportation facilities. Secondly, the distribution of resources after American invasion causes many disputes among the groups living in Iraq. Most of the oil reserves in Iraq are located in Basra and Kirkuk regions, in other words south and north of Iraq respectively. Basra has the greatest share in oil reserves with 60 percent of all Iraqi reserves. Together with Mesan and Nasiriya, the reserves of southern provinces reach up to 70 percent of the total Iraqi oil

[436] Qatari government calls South Pars as North Field.
[437] Qatar's oil production is around 45 million tons of oil. For oil production in Qatar, see: Country Analysis Briefs: Qatar, *US Energy Information Administration,* December 2009, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Qatar/pdf.pdf, pp. 1-4.
[438] *Ibid.* pp. 5-9.
[439] Country Analysis Briefs: Iraq, *US Energy Information Administration,* September 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Iraq/pdf.pdf, pp. 1-4.

reserves. In other words, most of the Iraqi oil is produced in the south and transferred through tankers. Almost all the rest of the proven reserves are located in northern part of Iraq. Kirkuk and some other fields in the north have around 13 percent of the total reserves while the Kurdish regions under the control of Kurdish Regional Government has slightly more than 3 percent of the total Iraqi oil reserves.[440] Most of the oil produced in Iraq is transferred to Asia while Europe only receives 20 percent of Iraqi oil[441]. This clearly shows that Europeans are not very active in Iraq, which has vitally important oil reserves. However, as in all other regional actors, the natural gas resources of Iraq are more important than oil for Europe.[442] Therefore, by actively working on Iraqi natural gas, Europeans may provide leverage against other competitors who are more active in developing Iraqi oil. Although incomparable to the reserves in Russia, Iran or Qatar, with 3.2 tcm proven reserves of natural gas, Iraq can help Europe's efforts to diversify energy resources.

On the other hand, some analysts argue that Iraqi reserves may be increased to 8.5 tcm if necessary investment is provided. As in the case of Iraqi oil reserves, approximately 70 percent of the Iraqi gas lies in the Basra province.[443] The rest of the gas, on the other hand, is located in the northern Iraq. In other words, more than 1000 bcm gas would be available to European network via Turkey with a very low cost. Building a 250 km pipeline to Turkey from Northern Iraq would solve contribute European efforts to solve the energy security question in a very short period of time. Later, the rest of the Iraqi gas would also be attached by internal pipeline system in Iraq.

Besides the gigantic reserves in the Iran, Qatar and Iraq, there are also crucial natural gas reserves in Saudi Arabia and Egypt. Saudi Arabia is expected to have the fourth largest natural gas reserves in the world with its 7.3 tcm natural gas reserves. Saudi Aramco argues that the amount is close to 8 tcm. The ambiguity is a result of insufficient natural

[440] Al-Mahaidi, Kamil, 2006, Geographial Distribution of Iraqi Oil Fields and its Relations with the New Constitution, *Revenue Watch Institute,* retrieved on 25.11.2010 from www.iraqrevenuewatch.org/reports/052706.pdf, pp. 1-7.
[441] Country Analysis Briefs: Iraq, *op-cit.,* p. 5.
[442] As mentioned before, oil is a much more tradable commodity than gas. Securing gas is very critical, and oil can be secured relatively easily if the buyer has enough economic resources.
[443] Country Analysis Briefs: Iraq, *op-cit.,* p.6-7.

gas exploration efforts in the country.[444] However, linking the gas fields to the pipelines in Iraqi territory which will connect to the pipeline in Turkey would easily bring Saudi Arabia's reserves to the use of European consumers. From this point of view, Saudi Arabia is not negligible. Similarly, Egypt is another gas producer that Europe can benefit from. Egypt has considerably lower natural gas potential with reserves of 1.65 tcm. As a result of the rapidly developing gas sector in Egypt, the annual production is reached to 56 bcm annually which is far greater than Azerbaijan.[445] Although half of it is consumed in internal market, the rest would be transferred to Europe with linking the country to European grids via Jordan, Syria and Turkey.

To sum up, the neighboring countries to Turkey in various regions have great energy resources that may solve Europe's energy dispute. The common point of these resource rich countries is that the best alternative route for their energy trade with Europe passes through Turkish territory. Since oil is a more flexible product than natural gas in terms of transportation and trade, it is difficult to argue that Turkey presents the best alternative route for oil.[446] However, for the optimum transportation of natural gas, pipelines are critical. Pipelines, on the other hand, are strategic decisions that do not let to change the trading partners once it is built. In other terms, when a pipeline is built the seller does not have any option to shift to any other alternative customer, and vice-versa. Therefore in such a critical decision, European countries are aware of the fact that the regions surrounding Turkey is full of oil and gas resources, which could be destined to European consumers. In the Caspian, Azerbaijan, Turkmenistan and Kazakhstan are the most probable sources with around 1000, 2600 and 2400 bcm of natural gas, respectively. In the Middle East and Gulf region, Iran and Qatar presents huge reserves with a total of 55000 bcm, which may help a real solution to the dependency problem of the major European powers. With reserves of at least 3.2, 7.5 and 1.6 tcm, Iraq, Saudi Arabia and Egypt may also contribute to European energy question by linking these resources to a major pipeline going from the region to Europe. All these reserves may be helpful for Europe to solve the energy problem, yet there are certain problems.

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[444] Country Analysis Briefs: Saudi Arabia, *US Energy Information Administration,* November 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Saudi_Arabia/pdf.pdf, pp.12-13.
[445] Country Analysis Briefs: Egypt, *US Energy Information Administration,* June 2010, retrieved 25.11.2010 from http://www.eia.doe.gov/emeu/cabs/Saudi_Arabia/pdf.pdf, pp.4-5.
[446] Turkey can present the best route even for oil particularly for the land locked Caspian countries.

First of all, these resources are not taken for granted and requires these countries to be convinced. Since there are other alternative buyers such as Russia, India, China or other South East Asian countries, it will not be easy to persuade those countries. In addition, the Europeans need to be certain on a specific route for the pipeline(s) which will carry these resources to the continent. As in most of the energy related issues, Europeans do not have a consensus among the Union members about the necessity of these resources. To sum up, whatever the decisions of major European countries are, the producers surrounding Turkey presents a total of at least 63 tcm of natual gas. This amount is highly sufficient to meet the annual natural gas consumption of OECD Europe, which is roughly equal to 560 bcm.[447]

4.5. Turkey's Contribution to European Energy Policies

As explained above, European countries have several alternatives to Russian gas in order to alleviate the dependency on that country. Among others the main alternative is the so called fourth corridor, namely Caspian Basin, Central Asia, Gulf regions and the Middle East, which are all in Turkey's neighborhood. As a candidate country for EU membership, therefore, Turkey has been regarded as an important hub or transit country between these energy resources and Europe. A lot of projects, including the frequently mentioned Nabucco, have been developed in order to stress Turkey's role in energy policy.[448] In that sense, Turkey is perceived not only as an alternative route for reaching oil and gas resources but also as an element for strengthening the ability of European states to bargain with Gazprom.[449] In other words, European powers cannot ignore Russia totally, but should prevent the energy giant from using energy as a tool of foreign policy.

On the other hand, some other experts argued that North African resources will become a real alternative to Russian gas, while Caspian resources will only play an indirect role for European gas supply.[450] However, the figures given above clearly confirms that the fourth corridor is not only necessary for providing resources to Europe, but also for limiting other

[447] International Energy Outlook 2010, *US Energy Information Administartion,* retrieved 26.11.2010 from http://www.eia.doe.gov/oiaf/ieo/nat_gas.html.
[448] Roberts, John, 2004, *The Turkish Gate: Energy Transit and Security Issues*, Centre for European Policy Studies, EU-Turkey Working Papers No: 11, Brussels: CEPS.
[449] Götz, Roland, 2007, *Russian Gas and European Energy Security*, Stiftung Wissenschaft und Politik Research Paper No: 10, Berlin: SWP, pp. 10-1.
[450] Winchester, Robert F., 2007, European Energy Security: Wrestling the Russian Bear for Caspian Natural Gas, Carlisle Barracks: U.S. Army War College.

major powers to access those resources which are steadily becoming an important element of power at international system.

Turkey's role should not be evaluated solely as a geographical location in between the departure and arrival stations of oil and gas, but rather it should be evaluated with respect to a systemic analysis of international politics. In light of the structural theory, the perspectives of other major powers should also be attached into an analysis of these energy rich regions. In more concrete terms, American foreign policy with respect to Caspian, Iran and Middle East should be included in the analysis as well as Russian and Chinese policies. Therefore, in the following part of this study, a structural analysis of Turkey's role is presented with reference to major power's policies in those regions.

As mentioned in Chapter III, the Turkish energy grid is rapidly improving and is expected to be filled with Caspian and Middle East resources to transport natural gas and oil to Europe. The construction of Baku-Tbilisi-Erzurum pipeline is the most prominent example of Turkey's willingness. The pipeline initially transports Azerbaijani gas to Turkey, then to Europe via existing pipelines. The following stage for that project is to carry other Caspian resources from Turkmenistan and Kazakhstan through a trans-Caspian pipeline to Europe by linking Nabucco pipeline to the existing system. However, Caspian resources may not be sufficient to implement huge pipeline projects. Therefore, apart from Caspian resources, Iranian and Middle East reserves should also be linked to the Turkish energy grid destined for Europe. Each of these energy rich regions should be evaluated separately in detail as well as foreign policy considerations of major powers on these particular areas.

4.5.1. Caspian Basin and Central Asia

As previously stated, natural gas and oil reserves of the region are seriously considered as important sources of energy by the great powers.[451] Since Caspian Sea is a landlocked area, there are not so many alternative ways to export the energy resources to the world markets. For the European energy markets, on the other hand, two alternatives emerge as viable transport routes: Turkey or Russia. Iran may also be perceived as an alternative

[451] Most of the reports prepared by major power governments declare the importance of Caspian resources. See Gelb, 2006 and Winston and Young, 2005.

route as far as oil transportation is considered.[452] However, the existing pipelines passing through Russia and Turkey decrease the probability of an Iranian alternative. Moreover, the recent debates between Russia and other transit countries negatively affected Russia's reliability in the eyes of Europeans. As a result, Turkey seems the most reliable alternative for linking European energy market to Caspian basin resources.[453]

The economic feasibility of routes passing through Turkey, on the other hand, is not sufficient to guarantee Caspian oil and gas for European markets. The economics is only one side of the coin. The political perceptions of great powers have also played an important role in shaping the energy relations between Europe and the Caspian States.

First of all, Russian policy towards the region is an important element effecting Caspian energy issues. Except for Iran, all of the Caspian countries were former Soviet Republics. Russia has always inclined to perceive the region as its backyard and has begun to follow an interventionist policy in its relations with the Caspian states since the end of Cold War.[454] Under 'Euroasianist' Russian Prime Minister Yevgeny Primakov's term, Russian interests in Central Asia renewed. Russia, furthermore, intensified its interest in this region after involvement of American military operations in some Central Asian States.[455] The Russian strategy has changed into a cooperative policy in line with the principle of solidarity against the fight of international terrorism. After the initial support in U.S. fight against Taliban in Afghanistan, however, Russian policy makers preferred to go on with more involvement in Central Asian politics. Particularly after the U.S. invasion of Iraq in 2003, Moscow "tried to project Russia's image as a traditionally reliable partner for the quasi-autocratic Central Asian leaders"[456]. Russia has been interested in the region for several reasons: First of all, instability in the region would pose a direct threat to Moscow. Secondly, unrestricted rights of transit are necessary to improve cooperation with China,

[452] Alternative Iranian route requires transporting oil via tankers from its ports in Persian Gulf. However, it is not feasible to carry natural gas by the same way because of the high cost of liquification process.
[453] Oktay, Ertan and Çamkıran, R.F., "Avrupa Birliği'nin Enerji Güvenliği Açısından Türkiye'nin Önemi", *Marmara Journal of European Studies,* Vol.:14, No:1, pp. 153-173.
[454] Kubicek, Paul, 1997, "Nationalism and Realpolitik in Central Asia", *Europe-Asia Studies,* Vol. 49, No: 4, pp. 651-2.
[455] Freire, M.R., 2009, "Russian Policy in Central Asia: Supporting, Balancing, Coercing, or Imposing?", *Asian Perspective,* Vol. 33, No:2, p. 131.
[456] Allison, Roy, 2004, "Strategic Reassertion in Russia's Central Asia Policy", *International Affairs,* Vol. 80, No:2, pp. 279-80.

India and Iran. Thirdly, Russia has economic benefits from those countries not only with regards to their rich underground resources, but also as a market for several Russian industries. Finally, geostrategic potential of the region in military terms is necessary for Russia to preserve its great power status.[457] In order to improve those interests in the region, Russia has sought developing intense relations with the current leading elite as well as engaging security cooperation with those countries.

In addition to use positive tools, Russia has also resorted stick in certain cases. In that sense, Russia's use of energy issues as a tool of foreign policy is also obvious in its relations with some of the Caspian countries. As one of the substantial sources of natural gas in Soviet period, Turkmenistan could not be able to freely export its gas to world markets because the country became a competitor to Russia. Since the country had only one export option over Russian territory, they were restricted with the limitation policies of Gazprom. Being aware of this power, Russia tried to control Turkmenistan's gas production until a new pipeline built from Turkmenistan to Iran.[458]

After 2002, Russian President Putin tried to form various multilateral or bilateral military agreements with Central Asian leaders and to revive Russia's military and security influence in the region, which was deteriorated after September 11.[459] Collective Security Organization Treaty is one of the most prominent examples of this strategy in 2002. It is followed by the inauguration of a new air base at Kant in Kyrgyzstan in late 2003. On the other hand, Russia's influence on some other regional countries is not so promising. Uzbekistan, for instance, has developed military and security assistance programmes with the United States after September 2001.[460] The case of Uzbekistan is important because it may confirm that there is a contest between major powers in the region. When the Uzbeks asked U.S. to leave the air bases on their territory, Russia took the chance through Shangai Cooperation Organization and also by offering bilateral agreements to Uzbekistan. The

[457] Trofimov, Dmitry, 2003, "Russia and United States in Central Asia: problems, prospects and interests", *Central Asia and the Caucasus*, Vol. 19, No:1, p. 76-7.
[458] Arınç, İbrahim and Elik, Süleyman, 2010, "Turkmenistan and Azerbaijan in European Gas Supply Security", Insight Turkey, Vol.12, No:3, p. 173.
[459] Allison, *op-cit.,* pp. 284-5.
[460] Although the Americans opened air bases for Afghanistan operation, Uzbeks asked U.S. to close their bases in 2005. See, Walsh, Nick Paton, 2005, "Uzbekistan kicks US out of military base", *The Guardian,* 1 August 2005, retrieved on 10 June 2010 from http://www.guardian.co.uk/world/2005/aug/01/usa.nickpatonwalsh.

recent problems in Kyrgyzstan may confirm that Russia has gained the Uzbek support in her power contest with the United States.[461] In short, "by assuring a margin of maneuver in political-diplomatic and economic terms, Moscow simultaneously pursues the goal of keeping this area as a sphere of influence and as a counterbalance to the U.S. presence in the region"[462].

In light of these findings about Russia, it can be clearly argued that currently Russia is one of the indispensable actors of Central Asia and Caspian politics and will probably continue to be the dominant power in the region. Therefore, what kind of implications Russian influence in the region may expose on European energy security emerges as a central question as far as Caspian resources are considered. In more concrete words, as a potential rival power in a future multi-polar international structure, Russia's dominance on the foreign policies of the Caspian and Central Asian republics would have unwilling consequences for Europe and other great powers. Building pipelines from these countries to Europe via Russian territory, in that sense, would cause two main consequences: Firstly, it would increase Russia's ability to use energy as leverage in foreign policy. Secondly, it would diminish the ability of the regional actors to confront the policies of Russia. Therefore, Russian territory is not a viable solution for Europeans to construct an energy corridor to the Caspian resources from the lenses of neo-realism.

Since Russia is not a very reliable energy partner who generally prefers energy policy as a tool in its foreign policy, Turkey becomes a clear alternative to transfer Caspian and Central Asian energy resources to European market. As mentioned before, Iran might be an alternative but the cost of LNG and regime problems of the country make the Iranian option unfeasible. In that sense, the best route for Caspian resources seems to be the Turkish territory, which has currently been used for the Azeri gas. However, the current infrastructure has been constructed in order to meet the demand in Turkey and is not sufficient to feed the European countries. The Nabucco pipeline project was designed in order to increase the capacity in order to provide an efficient trade between Europe and the Caspian countries. An increased pipeline capacity, on the other hand, is a huge investment

[461] Bhadrakumar, M.K., 2010, "A Russian-Uzbek challenge to the U.S.", *Asia Times,* April 23, 2010, retrived on 10 July 2010 from http://www.atimes.com/atimes/Central_Asia/LD23Ag02.html.
[462] Freire, *op-cit.,* p. 129.

and requires more resources than the Azeri gas. In that sense, Caspian gas requires a very delicate balance of regional cooperation among Turkey's eastern neighbors. It becomes clear that most of the Azerbaijan's gas is guaranteed to fill up Nabucco, while Kazakhstan, another potential gas provider, is not guaranteed yet. As for the Turkmen gas, on the other hand, China emerges as a very critical rival actor.[463] By the end of 2009, China has already concluded several oil and gas supply agreements with Kazakhstan, Uzbekistan and Turkmenistan and constructed Kazakhstan – China Oil Pipeline and commissioned Central Asia-China Gas Pipeline.[464]

To sum up, as long as Europe attracts these three countries as a reliable energy buyer, European energy security will improve, and as long as Turkey convinces these countries to provide natural gas to Europe, Turkey's importance for European countries becomes more critical. In other words, the Caspian and Central Asian resources are not totally sufficient, yet are very important for European energy security question, which requires Turkey's full support.

4.5.2. Iran

As an important oil and gas producer, Iran should be evaluated separately. This country has both reserves in the Caspian and in the Gulf. Considering Iran's multi-regional status, it is impossible to disregard Iran when energy policies are shaped. Unlike the Caspian Basin, the Russian impact on Iran is very trivial. From a European perspective, the most critical question with regards to Iran is related to the U.S. and China. As for the former, the strict U.S. sanctions on this country inhibits European entrepreneurs to engage more actively in Iran while the latter has become a tough competitor for Europe as far as the vast Iranian oil and gas resources are considered.

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[463] China has begun to direct its energy companies to acquire interest abroad since early 1990s when the country turned into a net importer of oil. See: Hall, Gregory and Grant, Tiana, 2009, "Russia, China and the Energy Security Politics of the Caspian Sea Region after the Cold War", *Mediterranean Quarterly,* Vol. 20, No:2, pp. 124-9.

[464] For details of Chinese activities in the energy markets of Central Asia and Caspian, see: Turkmenistan to Join China, Kazakhstan pipeline project, 2007, *Forbes,* retrieved 07.04.2007 from http://www.forbes.com/feeds/afx/2007/07/04/afx3883648.html.; Sharip, Farkhad, 2007, "China Secures New Access to Kazakh Oil", *Euroasia Daily Monitor,* Vol. 4, Iss. 237.; Kazakhstan, China agrees to press ahead with pipeline, 2007, *Reuters,* retrieved 08.1102007 from http://uk.reuters.com/article/idUKL0888292120071108.

First of all, developing special relations with Iran is not as easy as other regional actors since there is an ongoing U.S. embargo on that country. The primary motive of the Iran Sanctions Act is to prohibit trade with and investment in Iran in order to hinder its ability to modernize its key hydro-carbon sector.[465] In other words, the U.S. perceives investing in Iran as a direct threat. Since U.S. has refrained from investing in Iranian energy sector, directly investing huge amounts in that country by major European powers would somehow be regarded as an effort of balancing the U.S. power.[466] Despite this fact, some of the energy companies of the major European countries invested considerable amounts in Iran. Since 1999 French Total and Italian ENI invested more than 3 billion USD in Iranian energy sector.[467]

On the other hand, the current American administration works very hard for encouraging foreign companies to halt their investment in Iran.[468] As a result of this pressure, four of the Europe's five biggest oil companies convinced to stop their activity in Iran.[469] Serious messages from the superpower deterred most of the other major powers in the unipolar structure. However, China is somehow reluctant to receive the U.S. message about investing in Iranian energy fields because Iran is the third main energy supplier of China. Chinese state owned oil companies have signed memorandums, which covers more than 100 billion USD investment in Iran's gas and oil production. In some of the cases, Chinese companies have replaced gas and oil fields that were formerly contracted by European energy companies.[470] From this point of view, ongoing Chinese investment in Iran means that China will have greater benefits than Europeans from Iranian energy

[465] Katzmann, Kenneth, 2007, "CRS Congress Report for Progress: The Iran Sanctions Act", *Congressional Research Service- The Library of Congress*, retrieved 26.11.2010 from www.fas.org/sgp/crs/row/RS20871.pdf, pp.1-5.
[466] Ikenberry and others has made an analysis on recent balancing activities on the current world structure. See: Ikenberry, John G., Mastanduno Michael and Wohlforth, William, 2009, "Unipolarity, State Behavior and Systemic Consequences", *World Politics,* Vol.61, No: 1, pp.1-27.
[467] Katzmann, *op-cit.,* p.6.
[468] Kaufman, Stephen, 2010, "Pressure Increases to Discourage Energy Investment in Iran, *America.gov,* retrieved 30 October 2010 from http://www.america.gov/st/mena-english/2010/September/20100930162745esnamfuak0.3756525.html.
[469] Kraus-Jackson, Flavia and Sheikholeslami, Ali, 2010, "Total, Shell, Eni to End Iran Investments, U.S. Says", *Bloomberg,* 01 October 2010, retrieved 30 October 2010 from http://www.bloomberg.com/news/2010-09-30/total-shell-eni-will-end-investments-in-iran-s-energy-sector-u-s-says.html.
[470] Pompfret, John, 2010, "European oil companies pledge to end oil investment in Iran over nukes program", *The Washington Post,* 30 September 2010, retrieved 30 October 2010 from http://www.washingtonpost.com/wp-dyn/content/article/2010/09/30/AR2010093006452.html.

resources because of the U.S. sanctions imposed on European countries. Put differently, China would clearly have relative gains against Europe unless U.S. achieves to convince China not to cooperate with Iran in energy sector. Being anxious about Chinese activity, Europeans are leaving Iranian fields involuntarily because of American pressure. On the other hand, some major European Union members like Germany still searches for energy investments in Iran[471], which can be read as a confirmation of a drift in transatlantic relations.

However, the power gap between the U.S. and major EU countries do not let Europeans to implement their own policy in the region. This may increase the inclination of Europeans to engage in balancing against the United States. However, it becomes clear that Europeans cannot implement their policies without the approval of the U.S. Since the Europeans cannot directly oppose to their long-term ally and protector, they may prefer soft balancing.[472] Therefore, it is possible to argue that the U.S.'s Iran policy and the pressure imposed on Europeans may increase the inclination of Europeans towards balancing, which is consistent with the arguments about the consequences of aggressive U.S. unilateralism.[473]

In contrast to European's conformity with the American policy, some other great powers are not totally obedient to U.S. preferences. China, for instance, continuously invests in Iran without considering the American pressures. China engages in a policy to develop special relations with countries which may provide necessary economic resources to the Chinese economy. Iran is one of these countries that China develops special relations.[474] According to some analysts, China assumes even the risk of war so that U.S. should let a room to the rising power of Asia.[475] Furthermore, Russia has also given

[471] Iranian energy sector attracts investment, 2010, *United Press International,* 25 August 2010, retrieved 30 October 2010 from http://www.upi.com/Science_News/Resource-Wars/2010/08/25/Iranian-energy-sector-attracts-investment/UPI-78671282751806/.
[472] Pape, *op-cit.,* pp. 8-9; Paul, *op-cit.*, pp.46-71.
[473] For the negative impact of unilateral approach of the US, see: Nye, Joseph S., 2002, *The Paradox of American Power: Why the World's Only Superpower Can't Go It Alone*, New York: Oxford University Press; Zhou, Yu, 2001, "American Unilateral Approach Threatens International Relations," *Beijing Review*, Vol. 44, Iss. 32, pp. 8–10; Rodman, Peter W., 2000, "The World's Resentment: Anti-Americanism as a Global Phenomenon", *National Interest*, No. 60 (Summer 2000), pp. 33-41; Art, Robert, 2003, *op-cit*.
[474] Foot, Rosemary, 2006, "Chinese Strategies in a US-Hegemonic global order: Accomodating and hedging", *International Affairs,* Vol.82, No:1, p. 86-7.
[475] Zweig, David and Jianhai, Bi, *op-cit.*, p.25.

considerable support in Iran's nuclear projects mainly for two reasons: Firstly, Moscow is uneasy with the U.S. penetration into the region and increased its strategic cooperation with Iran.[476] Secondly, Iran is an important economic partner for Russian military and nuclear industries, which has been in decline since the end of the Cold War.[477] Whatever the most prominent reason of Russia-Iran rapprochement is, it is clear that Russia may step forward in Iran if Europeans fall behind. In other words, Russia's balancing efforts against U.S. hegemony may be helpful for Europe, but it should be remembered that Russia is also another great power that Europe should somehow contain.

From this point of view, Europe should find a way to develop its strategic relations with Iran either by convincing the American administration to implement looser policies on that country for chastening Iran into more moderate behaviors, or by development of more democratic administration in Iran. Europe should also do this very soon since Russia, India and China are currently increasing their activities in Iranian energy fields. Being aware of this fact, European Commission increased its support for projects delivering natural gas from the region to Europe. Nabucco Pipeline project is the most prominent and concrete example. It is clear that the production level of Caspian countries are not sufficient to fill up the Nabucco line. In other words, European authorities must have thought some other resources when they declared support for Nabucco. This clearly shows that Europeans are interested in Iran, but cannot show their enthusiasm during an active American embargo. This, again, confirms the impact of systemic effects on actors' foreign policies as well as their energy policies.

The best route from Iran to Europe for building a natural gas pipeline is through Turkish territory. It is not feasible to pass from southern or northern routes. In a probable route destined to Europe from south of Turkey can pass through Iraq, Syria and a long off-shore pipeline under the Mediterranean which means instability and extra cost. A northern line, on the other hand, can pass through Russian territory and a long off-shore pipeline under the Black Sea, which means extra cost and continuation of dependency on Russia. Therefore, Turkey seems to be the best alternative with relatively cheaper construction costs and reliable political structure as a candidate country of the EU.

[476] Walt, 2004, *op-cit.,* p.15.
[477] Brooks and Wohlforth, 2005, *op-cit.,* pp.88-90.

Moreover, Turkey expresses for many times its will to build such a pipeline. In line with this perspective, some analysts argue that "in a multi-centered energeopolitical order where Russia and China are rival to U.S. and EU, some actors like Turkey have found themselves at the centre of attention as energy hub"[478]. Moreover, for some analysts, Turkey's role has been perceived as vitally important for connecting Europe to reserves in Caspian and Iran because of the stability and cost-efficiency that Turkey presents[479]. It is not an exaggeration to argue that Turkey has become a key player in energy politics, therefore, a key international actor in the regional politics.

4.5.3. Middle East

As mentioned before, some of the Middle East countries have considerable level of energy resources that may be decisive in shaping the structure of international system. To control and benefit from these resources are vitally important for great powers since energy security becomes a part of great power politics. For major EU powers, Middle East resources are critical for providing the diversification of energy resources. However, it is not very easy question for Europeans to solve for several reasons. First of all, Europeans are not the only major powers interested in this region. Since the Cold-War, both United States and Soviet Union have deep interests in the Middle East resources. As for the former, it is critical to continue the control most of the energy resources for preserving the unipolar structure. Therefore, U.S. government has perceived that U.S. security is directly related to the security of the Persian Gulf.[480] The Russian's are also interested in the region since the Cold War. Soviet Union had a privileged position particularly in Iraq until the Iraqi invasion of Kuwait in 1991. After the collapse of the Soviet Union, Russia tried to protect its leading role in Iraqi market while Iraqi leadership tried to provide Russia's political support at the international level in exchange for privileges in energy fields.[481] This relationship changed prior to the American invasion of Iraq in 2003. Kremlin was

[478] Coşkun, Bezen Balamir and Carlson, Richard, 2010, "The New Energy Geopolitics: Why Does Turkey Matter?" *Insight Turkey,* Vol.12, No:3, pp. 208-9.
[479] Arıboğan, Deniz Ü. Ana Bilgin, Mert, 2009, "New Energy Order Politics Neopolitics: From Geopolitics to Energeopolitics," *Uluslararası İlişkiler*, Vol. 5, No. 20, p. 127.
[480] Aras, Bülent, 2002, "The Caspian Region and Middle East Security", *Mediterranean Quarterly,* Vol.13, Iss.1, pp.92-4.
[481] Zlobin, Nikoai, 2004, "Iraq in the Context of Post-Soviet Foreign Policy", *Mediterranean Quarterly,* Vol.15, Iss.2, pp. 89-93.

attempting to gain some concessions from Washington in return for political support of a military strike on Iraq. However, Russia was unable to get what it expected from the superpower.[482] This clearly shows that the United States has great economic interests in Iraq and do not want to share its privileged position with any other potential rival power. It has long been discussed that the American administration's primary motivation behind the Iraqi invasion is to guarantee the energy resources in the region.[483] Remembering the cleavages in NATO with regards to Afghanistan and Iraq Wars, it would not be hard to argue clash of interests between some major European powers and the U.S. In other words, Europeans can no longer trust the U.S. about the energy resources in Iraq. Since the Europeans even do not rely on each other, it is difficult to imagine that Europeans would totally trust in American power and good faith. As Adams argued, "The more the United States expands, the more it will threaten the political and economic interests of other nuclear states. Thus, a new balance of power will surely form somewhere down the road"[484]. That is why, it may also be argued that the Americans are not very eager to let Europeans to take part in Iraq as an effort to control all other major powers within the international system. The limited activities of European companies in Iraq confirm the possibility of such a U.S. policy.

From this point of view, Europeans should work harder in order to guarantee Iraqi gas to flow into European energy grid. As mentioned before, investment in Iraqi gas is also important for using Iraqi territory for transporting gas from other southern countries, namely Qatar and Saudi Arabia. Although reserves in Saudi Arabia are also important for the sake of diversification, with its gigantic reserves, securing an agreement with Qatar is much more important than any other country in that region. Although this emirate messes around with gas production issues until the natural gas market becomes more lucrative as oil market,[485] having friendly relations with Qatar will be beneficial for major powers who are seeking for energy security. Securing all these resources in the Middle East, on the

[482] The concessions included guarantees for the existing agreements between Iraq and Russia as well as respect for Russia's political and economic interests in the region. See: *Ibid.,* p. 96.
[483] For a detailed analysis of these arguments, see: Jhaveri, Nayna J., 2004, "Petroimperialism: US Oil Interests and the Iraq War", *Antipode,* Vol. 36, Iss.1, pp. 2-11.
[484] Adams, Karen Ruth, 2003, "Attack and Conquer? International Anarchy and Offence Defence Deterrence Balance", *International Security,* Vol. 28, No:3, p. 83.
[485] Dargin, Justin, 2007, "Qatar's Natural Gas: The Foreign Policy Driver", *Middle East Policy,* Vol. 14, No: 3, pp. 136-142.

other hand, requires the cooperation of Turkey since Turkey's territory presents the most viable route among alternatives.

To sum up, Europeans should increase their activities in Middle East as they should do the same in the Caspian, Central Asia and Iran. Considering the American hegemony, "Europe, Russia, and China could press hard for the oil companies from countries other than the United States to have access to Iraqi oil contracts, which would increase the economic costs of U.S. occupation of that country"[486]. In line with this argument it may be argued that Russia and China engage in activities in the Middle East while Europeans prefer to comply with U.S. policies. However, major European countries should be more active and guarantee the necessary energy if they really want to become a great power. In doing so, Turkey has a pivotal situation for transporting the gas and oil from the region to Europe via pipelines. As in the cases of Caspian and Iran, Turkey could provide the best solution for European energy security, which is one of the most prominent parts of Europe's global actorness. From this point of view, the ongoing activities of Turkey in certain fields in Iraq[487] would be regarded as an initial step of an increased European activity in energy politics of the Middle East.

4.6. A Neo-Realist Evaluation of European Energy Security and Turkey

As clearly explained in previous parts of this study, the current structure of the system enforces major powers to question the unipolarity. Since European Union is not a decisive actor in international relations, the bigger member states and their foreign policy choices are more important than the Commission's policies. Examining the energy security question at European level actually confirms the impact of unipolar structure on individual member states. In other words, while Commission tries to form a common energy policy, the member states behave individually to guarantee their own energy security. Moreover, all major member states refrain from subordinating their energy policies fully to the discretion of the Union like they have already done the same for the foreign policy issues. None of the member states, on the other hand, is capable of becoming a great power

[486] Pape, *op-cit.,* pp. 10-11.
[487] El Gamal, Raina and Rasheed, Ahmed, 2010, "Iraq auctions off three major gas fields", *Reuters,* retrieved on 21 October 2010 from http://www.reuters.com/article/idUSTRE69J1LV20101020.

individually which may have the power to question the current American hegemony. Thus, they do not engage any overt balancing effort against the US.

However, this does not prevent Europe from being anxious about American power. Since the United States has greater military power than the total of the following five countries, Washington will be perceived as a potential threat by all other actors including the former Cold-War allies. In addition to Washington's military superiority, the United States controls most of the energy rich regions particularly in the Persian Gulf region. A combination of military and economic weaknesses cause anxiety among major European powers since the transatlantic alliance is challenged by differing geopolitical interests of each partner.[488] From the military perspective, Europeans have developed ESDP and try to form an army capable of rapid reaction where military operations are necessary. Furthermore, that security initiative of the Union has also evolved within an institutional structure after the Lisbon Treaty.[489] From the economic perspective, energy security takes precedence. Russia becomes an important actor for Europe since it has large energy reserves. In other words, the former superpower and former rival of Western alliance in the Cold War period has turned into a strategic partner of Europeans in the post Cold War era. However, because of its huge nuclear and conventional arsenal and its natural resources, Russia would still be another source of threat for European countries. Therefore, major European powers cooperate but do not trust to the Russians in providing energy security. In other words, major European powers cooperate with Russia in terms of energy for being relieved from the control of United States.

On the other hand, Europeans do not perceive Russia as a reliable actor. For providing energy security, therefore, Europeans look for other regions to provide oil and gas. In doing so, Turkey emerges as an indispensable partner for European countries. Turkey, formerly a close European ally in the Cold-War period, experienced a change in its foreign policy. Once followed similar foreign policy choices with the United States, Turkish

[488] Calleo, David P., 2008, "Europe Should Balance US Interests", *Atlantic-Community.org,* retrieved on 18 September 2010 from http://www.atlantic-community.org/index/Open_Think_Tank_Article/Europe_Should_Balance_US_Interests.

[489] For a detailed development of ESDP's institutional structure, see: Grevi, Giovanni, 2009, "ESDP Institutions", in Grevi, Giovanni; Helly, Damien and Keohane, Daniel (eds.), *European Security and Defence Policy: The First Ten Years (1999-2009),* Paris: EU Institute for Security Studies, pp. 19-68.

foreign policy has changed after the end of Cold War and includes contradictions with the superpower. Although Turkey is not a great power, Turkey could stand against certain American policies. The most prominent example of conflict between Turkey and U.S. is about different approaches to the Iranian nuclear problem. While American administration follows a very strict policy against Iran, Turkey prefers a modest approach which aims to integrate Iran into international community. How to assess Turkey's behavior is another critical point to investigate. Turkey is not a major power, yet Turkey's policy makers could refuse certain American demands. In doing so, Turkey might be encouraged by the confusion of Europeans about supporting U.S. policies. Some of the Europeans support American approach to Iran while some others seriously oppose the U.S. hard policies against that country. Being aware of the importance of reserves in the Persian Gulf some major EU countries try to promote relations with Iran. Germany, as the leading power of the Union, gives particular attention to Iran. Germany's position, in turn, may be a factor for motivating Turkey to engage actively the normalization of crisis with Iran. Furthermore, Turkey also indirectly contributes to balancing by increasing its relation with the Russian Federation. Turkey and Russia have an increasing trend of strategic partnership, of which energy constitutes the core cooperation area.[490] In other words, Russia and Turkey has turned to be strategic partners as far as regional politics are considered.

As a final analysis, Turkey is a strategic actor in the energy policies of some of the major European powers. Despite the structural constraints inhibiting major and regional powers to balance against the U.S. hegemony, their efforts to provide energy security in an anarchic structure somehow results in a different type of balancing. Turkey, both with its increasing relations with Russia and with its special geostrategic position, has become an element of the big energy game.

[490] Turkey supports Nabucco project to transport eastern gas to European markets whereas Russia has proposed South Stream project, which is an alternative pipeline passes under the Black Sea. Turkey and Russia have even achieved to have consensus on these competing projects, which also causes concerns other smaller regional powers. See: Berberakis, Taki, et-al, 2010, "Türkiye-Rusya anlaştı, 'komşu' rahatsız oldu", *Milliyet,* 14.09.2010, retrived 21 October 2010 from http://www.milliyet.com.tr/avrupa-i-carpan-akim-/ekonomi/haberdetayarsiv/14.09.2010/1126099/default.htm.

CONCLUSION

This study argued a very highly debated issue, energy security, which will certainly be increasingly important since technological innovations prevail over in every aspect of our lives. Since most of the previously mechanically made processes turned into electronic systems, people will require more energy resources. The sources of energy, on the other hand, are declining with an accelerating pace. Under these conditions, a struggle for energy is a natural consequence. When this struggle shifts to international politics, energy becomes a matter of state survival. In realist terms, therefore, energy is an element of power, which is necessary for international actors to achieve self-help.

In an anarchic international system, states should also define their positions according to the structure that shapes the system. In more concrete terms, the uni-polar structure of post Cold-War period requires both major powers and other smaller states to depict certain type of behaviors. The uni-polar structure and the power gap between the superpower and others pave the way for American administration to behave unilateralist policies which in turn increases others' suspicion about the intrinsic motivation of the U.S. As a response to hegemonic pressure of uni-polarity, other major powers implements policies for balancing the American power. However, the unprecedented power of United States does not let others to challenge the superpower overtly. Therefore, new types of balancing emerge in international politics, which aims to put certain impediments against the unilateral behaviors of Washington.

When these structural features of the system combine with increasing importance of energy resources, energy security becomes an indispensable part of foreign policy. Russia provides the most prominent confirmation for this argument. After the Russian Federation lost its primacy that Moscow experienced during the Cold War, Russian leaders inclined to use as a tool of their foreign policy. Russia enforces others to comply with Russia's policies by threatening to cut natural gas supply. Actually, this policy works properly where dependency on Russian natural gas is very high like in Belarus or Ukraine.

In the current uni-polar structure, where United States dominates the superpower position, the policies of European countries is in conformity with the ambiguity of the system. Despite having a very long standing alliance relationship, major European powers are anxious about the intentions of United States. Although Washington provided a secure shield to Europe against the Soviet threat during the Cold War years, the end of bi-polarity changed the system's structure. NATO's functions have changed while the Europeans planned to form their own security structure under the auspices of European integration process. Considering these facts, it is not an exaggeration to argue that Europeans do not totally trust to American power in the post Cold War structure. The American pre-emptive wars after September 11 events reinforced Europe's anxiety. Divergences among transatlantic relationship become apparent particularly after the Iraqi War. What lies beneath the divergences between the two sides of the Atlantic was probably the difference in perception of and expectation for the future of international system. While Bush administration contented a neo-conservative movement with strengthening American position by using absolute military power, European capitals were more concentrated on a shift to multi-polarity. From that perspective, leading European countries follows a policy to adapt themselves to a new structure which is currently ambiguous enough to cause anxiety and distrust about the intentions of the allies.

Reading energy security question of the major European countries from a systemic perspective, therefore, requires an understanding of neo-realist point of view. Such an approach clearly shows that Europeans are trying to renew their energy policies in line with structural impacts and improve their relations with countries possessing large energy reserves. Some of these policies naturally contradict with the dominant power of the

system and the Europeans dare not challenge American power. This, in turn, enlarges the cleavage within the transatlantic alliance.

The American Administration, however, did not spend considerable attention to the European allies since their primary concern has been the continuation of unipolarity without raising any other competitor great power. This is the root cause of increasing partnership between Russia and European countries. The increasing relationship between Moscow and other European capitals confirms neo-realist critics about the use of American power. Neo-realists argue that the policies followed by Washington do not allow the persistence of uni-polarity. In contrast, those policies invoke others to balance the U.S. as long as it is possible. Russia, for instance, actively tries to implement a balancing policy. Although China is not very active in balancing, there are certain sentiments about Chinese enthusiasm for a global great power status. The current activities of these two actors in energy politics actually confirm their role in balancing the United States.

Europeans, on the other hand, do not prefer an active policy of balancing. As some scholars define, European efforts may be evaluated as a new type of balancing. By territorial denial, diplomatic entangling or some other means of politics, European countries implement a policy of soft-balancing. It is hard to argue that Europeans could use means of hard balancing if they had enough power to challenge the U.S. However, they may have a prompt role in balancing if the U.S. does not provide necessary confidence in European capitals.

From an energy perspective, European countries need access to energy resources. Their particular attention is on natural gas, which is increasingly becoming the dominant energy source in European countries. Policies of the EU Commission targeting energy security does not make sufficient sound among member states since each member gives priority to own energy security problem. For most of these members, Russia becomes an indispensable natural gas supplier. However, Russia is also a potential great power in the future multi-polar international structure. Therefore, depending heavily on a potential future rival is not an expected outcome of energy policies of Europeans. This fact enforces both the Commission and governments of major European powers to search for alternative

areas for providing hydro-carbon resources. Among these areas, Caspian countries, Central Asia, Gulf region and the Middle East emerge has the maximum potential.

Since the other major global powers similarly perceive anxiety about the uncertainty in the international system, they also pay considerable attention to the resources in those regions. China and Russia has particular attention on Central Asia and Caspian resources while other South East Asian nations concentrated on Gulf region. Moreover, the current superpower has certain interests in all these energy rich regions. Therefore, it is very important for Europeans to follow a policy to plug the maximum available reserves into the European grid from those regions.

For European Union, it would be very risky to concentrate solely on one of those regions since other major powers have deep interests in each of those areas. Therefore, it would be more appropriate for Europe to improve energy relations simultaneously with all of the countries from Caspian, Gulf region and the Middle East. By this way, Europe would diversify its energy supply at the highest level. In doing so, Europeans may face impediments because of several reasons. First of all, Washington would not be a supporter of such a policy. Since Europe is another potential great power, Washington would like to control the power of its European allies. In addition, the resources of these regions are critical for U.S. for being able to prolong its powerful position. In more concrete terms, Europeans currently cannot develop special relations with Iran due to American policies. However, Iran is one of the most important sources of natural gas that Europe may necessitate to decrease its dependency on Russia. Therefore, Europe needs to improve its strategic position particularly in Iran and Gulf region even if the United States does not approve such an activity.

Secondly, another challenge that Europe may face with regards to its increased activity in energy rich neighborhood is the Russian energy policy, which aims to control the European market by increasing the Russian share in natural gas supply of Europe. When Russian share increases in European energy supply, Russia will not only provide economic benefit, but also have the chance to influence European countries against the hegemony of U.S. In line with this effort, Moscow developed close relations with Caspian and Central Asian republics in order to fix the oil and gas transfer through Russian territory. In

response to Russian policies, major European countries should find alternative sources which will be delivered via non-Russian routes. Otherwise, dependency on Russia will cause a negative impact on foreign policy choices of the EU during the post uni-polar structure.

From this point of view, Turkey emerges as the most appropriate partner for Europe as far as energy security is considered. Located adjacent to several energy regions, Turkey naturally assumes a role of energy hub. There are several reasons that make Turkey the favorable alternative. First of all, Turkey is an alternative that can transfer gas and oil from all of the three regions mentioned in Chapter IV. Even though Russia is considered to be a reliable partner for Europe, transportation of Middle East and Iranian resources through Russia may not be feasible. On the other hand, any route passing through Turkey's southern neighborhood may not be profitable and safe, particularly for the gas transfer from the Caspian. However, using Turkey's territories is feasible and secure for a long-term investment in the resources of the Caspian, Iran and Middle East.

Secondly, Turkey is a pro-western country which makes the country a reliable partner. Turkey currently experiences the phase of accession negotiations in EU membership process and is a full member of NATO since the early Cold-War years. The only question about Turkey's reliability may be the growing Russo-Turkish partnership in several sectors. Energy is one of these sectors that Russia and Turkey actively cooperates. However, Turkey is a regional power and probably does not prefer to be directed by Russia. In other words, in a post uni-polar world, where Russia emerges as a great power, Turkey will not prefer bandwagoning. Because bandwagoning entails the risk of entrapment and because Turkey is geographically contained by various potential great powers, it would be logical for Turkey to bandwagon with any of the future great powers.

Thirdly, Turkey has improved its energy infrastructure particularly in the past decade. Together with the pipelines mentioned in Chapter III, Turkey also concentrated on forming storage capacity which is critical in natural gas. This may not be perceived as an advantage of Turkey by some analysts because Russia has also an intricate pipeline infrastructure. However, Russian pipeline system is old-aged and has to be improved in order to pump the necessary amount of gas and oil.

Considering these benefits that Turkey presents to Europe in terms of energy security, this study reiterates the importance of Turkey for European security in general and energy security of Europe in particular by using a neo-realist analysis. In that respect, the study argues that major European countries should improve their relations with Turkey by cooperating more in the energy field. In addition, they should convince oil and gas producing countries for exporting their energy products via Turkish route. Furthermore, in doing so members of the Union should be careful about the interests of other major powers including the U.S. In short, Turkey's role in European energy security is very important, yet not decisive by its own. Without considering other factors, providing Turkey's support would not be enough for Europe.

It is still not clear, on the other hand, that Europeans are fully aware of Turkey's importance. In certain policy papers, European Commission and other institutional bodies of the Union has mentioned the importance of Turkey. However, some other member states do not pay any attention to Turkey in energy security. France is the most prominent example. Some other members, like Austria, behave as if Turkey's support is taken for granted without asking Turkish policy makers about their views. In more concrete terms, Austrians signed a memorandum of understanding with Iran on natural gas sale which is planned to be transferred via Turkish territories, yet nobody asked Turkey about the transit conditions. As this example puts forth, Turkey's role is disdained by some of the Europeans. Turkey's policy makers do not like this kind of approach to their role in energy security. In that sense, if Europeans aims to guarantee Turkey's support, they should understand that Turkey is not a simple transit country. Otherwise, Turkey may search for alternative partners for cooperation in energy. Since Turkey's foreign and energy policy elite is suspicious about the future of unipolarity, Turkey may improve strategic partnership with Russia, which would have drastic consequences for European energy security.

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ANNEX-I: Oil Imports of Turkey for 2007

Description	Country	Unit	Import Quantity 1	Import Quantity 2	Import (USD)
Mineral fuels, mineral oils	Russian Federation	-/m3	0	2.459.430.901	6.560.101.240
	Iran	-/m3	0	348.874.140	1.756.977.490
	Algeria	kg	352.325.265	0	1.164.683.086
	Nigeria	kg	110.828.960	0	346.595.983
	Azerbaijan	-/m3	0	0	144.147.351
	Egypt	kg	0	0	26.944.947
			463.154.228	2.808.305.041	9.999.450.097
Coal and other solid fuels	Russian Federation	kg	9.875.929.844	0	1.159.972.773
	South Africa	kg	2.499.080.953	0	245.606.549
	Australia	kg	1.755.881.760	0	224.868.857
	China	kg	1.946.729.224	0	223.956.577
	U.S.A.	kg	1.637.679.250	0	219.772.898
	Canada	kg	1.376.052.876	0	183.691.196
	Colombia	kg	2.754.472.917	0	174.832.003
	Ukraine	kg	707.366.681	0	91.304.501
	Austria	kg	164.639.000	0	16.955.900
	Iran	kg	112.775.788	0	7.690.156
	Mozambique	kg	45.887.348	0	6.055.775
	Georgia	kg	54.393.000	0	4.037.088
	Italy	kg	11.363.740	0	852.281
	Vietnam	kg	3.239.646	0	826.110
	United Kingdom	kg	27.500	0	17.786
	Netherlands	kg	14.400	0	11.476
	Germany	kg	14.600	0	10.388
			22.945.548.527	0	2.560.462.314
Turb	Germany	kg	14.021.329	0	2.914.420
	Latvia	kg	8.488.510	0	2.156.540
	Lithuania	kg	8.952.078	0	1.842.417
	Finland	kg	3.667.842	0	1.157.882
	Estonia	kg	2.401.300	0	616.018
	Russian Federation	kg	942.378	0	151.479
	Netherlands	kg	482.000	0	128.076
	China	kg	252.028	0	95.965
	Sri Lanka	kg	242.594	0	78.629
	Belarus	kg	399.306	0	37.869
	U.S.A.	kg	13.832	0	23.815
	Belgium	kg	48.253	0	20.897
	Ukraine	kg	98.346	0	18.217
	Bulgaria	kg	60.339	0	12.498
	Costa Rica	kg	24.447	0	7.495
	Denmark	kg	68	0	605
	Italy	kg	91	0	365
	Canada	kg	65	0	224
			40.094.806	0	9.263.411
Other Coals (from coal and lignite)	Egypt	kg	299.896.803	0	63.179.681
	Ukraine	kg	72.682.334	0	12.474.268

	China	kg	24.709.452	0	7.847.616
	Italy	kg	16.122.588	0	5.075.947
	Russian Federation	kg	16.424.473	0	3.396.239
	Belgium	kg	5.944.450	0	2.169.724
	Germany	kg	1.102.799	0	868.914
	Romania	kg	3.962.850	0	486.352
	Bosnia and Herzegovina	kg	706.700	0	185.680
	Spain	kg	44.000	0	20.309
	Iran	kg	63.610	0	10.178
	U.S.A.	kg	5.506	0	4.123
	Colombia	kg	10	0	305
			441.665.575	0	95.719.336
City gas, coal gas and other gases	Germany	kg/1000 m3	74	144	7.480
	Switzerland	kg/1000 m3	1	6	1.236
			75	150	8.716
Bitumen (from coal and lignite)	United Kingdom	kg	59.175	0	51.325
			59.175	0	51.325
Other oils (from bitumen)	Spain	kg	3.117.030	0	2.761.952
	Israel	kg	2.836.032	0	2.445.663
	Belgium	kg	1.564.964	0	1.809.474
	Portugal	kg	1.179.248	0	1.058.203
	Ukraine	kg	690.000	0	652.358
	Bosnia and Herzegovina	kg	460.540	0	449.624
	Denmark	kg	168.000	0	178.648
	Netherlands	kg	62.680	0	90.250
	Germany	kg	32.429	0	78.693
	Italy	kg	11.945	0	28.024
	U.S.A.	kg	18.177	0	20.003
	Greece	kg	6.052	0	10.599
			10.147.097	0	9.583.491
Soft Coal	Iran	kg	14.910.953	0	6.624.783
	Egypt	kg	533.700	0	204.358
	Germany	kg	125.125	0	149.634
	Bosnia and Herzegovina	kg	100	0	163
			15.569.878	0	6.978.938
Crude Oil	Russian Federation	kg	9.501.341.344	0	4.885.019.654
	Iran	kg	8.846.742.613	0	4.194.791.430
	Saudi Arabia	kg	3.284.926.084	0	1.704.286.437
	Iraq	kg	897.797.870	0	526.408.508
	Italy	kg	391.719.828	0	216.693.038
	Libya	kg	279.277.564	0	139.334.550
	Syria	kg	243.959.133	0	117.676.757
			23.445.764.436	0	11.784.210.374
Oil (from petroleum and bitumen)	Russian Federation	kg	6.200.178.983	0	4.356.743.132
	Greece	kg	308.296.835	0	251.920.792
	Romania	kg	334.309.605	429.460	249.662.501

	Ukraine	kg	276.829.094	0	195.670.243
	South Korea	kg	263.378.107	0	193.306.502
	Romania	kg	290.030.538	0	186.238.926
	Italy	kg	252.027.182	0	174.811.433
	Bulgaria	kg	244.604.231	0	173.175.773
	Turkmenistan	kg	231.470.953	0	164.625.966
	Syria	kg	216.997.573	0	141.739.426
	Netherlands	kg	153.059.380	0	118.776.032
	Israel	kg/1000litre	151.058.971	199.696	113.102.272
	France	kg	91.291.662	0	79.076.418
	Azerbaijan	kg	108.781.585	0	77.880.047
	Iraq	kg	192.733.470	0	68.936.340
	India	kg	71.276.602	0	64.716.444
	Spain	kg	153.698.733	0	62.241.326
	Israel	kg	81.720.928	0	61.839.466
	U.S.A.	kg	100.042.204	0	56.745.255
	Malta	kg	70.211.161	0	55.393.033
	Greece	kg/1000litre	68.432.536	91.629	53.618.201
	Georgia	kg	65.268.028	0	41.190.282
	Algeria	kg	60.615.028	0	37.257.244
	United Kingdom	kg	47.434.380	0	34.251.877
	Latvia	kg	40.708.312	0	27.513.809
	Germany	kg	13.345.325	0	26.187.800
	Belgium	kg	20.849.145	0	24.992.150
	Sweden	kg	25.610.738	0	23.879.085
	Singapore	kg	36.248.117	0	20.459.660
	Norway	kg	45.003.415	0	19.990.048
	Countries and Territories not Determined	kg	31.858.301	0	18.870.389
	Belarus	kg	26.263.503	0	17.503.839
	Libya	kg	22.819.478	0	15.882.295
	Albania	kg	21.799.276	0	14.672.196
	Uzbekistan	kg	17.550.658	0	13.699.527
	Oman	kg	19.993.509	0	12.535.261
	France	kg/1000litre	11.870.412	13.512	11.491.958
	Portugal	kg	10.895.515	0	8.715.073
	Egypt	kg	9.336.303	0	8.587.229
	Bulgaria	kg/1000litre	7.846.070	10.441	5.821.596
	Austria	kg	1.321.343	0	3.718.655
	Croatia	kg	4.514.775	0	3.662.691
	Lithuania	kg	3.776.518	0	2.833.003
	Finland	kg	709.626	0	1.118.502
	Saudi Arabia	kg	1.273.163	0	949.966
	Switzerland	kg	140.263	0	675.985
	Japan	kg	147.852	0	659.342
	Brasil	kg	1.814.944	0	543.848
	Congo	kg	1.483.533	0	444.541
	Hungary	kg	195.687	0	301.502
	Iran	kg	591.088	0	296.683
	Canada	kg	77.402	0	224.863

	Taiwan	kg	99.395	0	141.442
	Thailand	kg	18.148	0	61.188
	Italy	kg/1000litre	2.847	3	40.791
	U.A.E.	kg	11.801	0	39.286
	Mauritania	kg	6.427	0	37.764
	Australia	kg	2.512	0	28.554
	United Kingdom	kg/1000litre	34.998	47	26.941
	Mexico	kg	3.923	0	18.126
	U.S.A.	kg/1000litre	18.129	20	12.126
	Spain	kg/1000litre	850	1	5.835
	South Africa	kg	1.500	0	5.577
	Denmark	kg	225	0	4.069
	Czech Republic	kg	640	0	3.881
	Germany	kg/1000litre	4.188	4	3.644
	Kazakhstan	kg/1000litre	1.480	2	3.184
	Ireland	kg	311	0	2.757
	Poland	kg	78	0	952
	China	kg	157	0	719
	Kazakhstan	kg	8	0	492
	Netherlands	kg/1000litre	550	3	468
			10.412.000.207	744.818	7.299.588.223
Oil gases and other hydro-carbon gases	Algeria	kg	1.188.769.208	0	765.346.751
	Norway	kg	310.317.684	0	196.677.909
	Kazakhstan	kg	257.926.057	0	170.199.175
	Libya	kg	244.008.690	0	144.475.208
	Nigeria	kg	189.831.959	0	125.706.411
	Russian Federation	kg	186.826.461	0	117.120.226
	U.A.E.	kg	116.731.442	0	83.434.451
	Saudi Arabia	kg	110.243.214	0	71.991.018
	Iran	kg	66.995.444	0	44.659.602
	Equatorial Guinea	kg	76.316.678	0	44.646.233
	Italy	kg	46.107.923	0	27.860.929
	United Kingdom	kg	32.605.474	0	19.783.179
	Ukraine	kg	27.347.894	0	15.191.917
	Arjantin	kg	19.931.574	0	10.911.412
	Egypt	kg	16.796.437	0	10.401.542
	France	kg	6.393.024	0	3.711.146
	Germany	kg	1.989.190	0	1.436.822
	Qatar	kg	2.500.000	0	1.391.556
	U.S.A.	kg	331.123	0	861.983
	Greece	kg	2.503.678	0	623.702
	Turkmenistan	kg	444.177	0	364.488
	Switzerland	kg	150.000	0	98.594
	Netherlands	kg	42.840	0	72.761
	South Korea	kg	43.512	0	15.903
	Belgium	kg	4.770	0	5.211

	Ireland	kg	1.400	0	2.951
	Austria	kg	43	0	1.292
	Finland	kg	1	0	585
	China	kg	15	0	400
			2.905.159.912	0	1.856.993.357
Vaseline, paraffin, other waxes	Egypt	kg	6.966.998	0	5.397.016
	Germany	kg	1.632.710	0	3.993.503
	Spain	kg	1.629.616	0	2.726.632
	Netherlands	kg	866.762	0	2.047.779
	South Africa	kg	580.705	0	1.169.474
	South Korea	kg	689.320	0	1.034.632
	Malasia	kg	300.000	0	541.156
	Italy	kg	278.422	0	433.850
	United Kingdom	kg	154.149	0	381.032
	China	kg	219.240	0	245.959
	India	kg	90.580	0	161.541
	U.S.A.	kg	39.982	0	156.143
	Russian Federation	kg	119.880	0	121.337
	Japan	kg	67.320	0	114.067
	France	kg	18.950	0	80.084
	Thailand	kg	35.700	0	56.390
	Iran	kg	131.000	0	54.584
	Denmark	kg	41.570	0	43.700
	Hungary	kg	4.300	0	14.740
	Greece	kg	2.000	0	14.550
	Israel	kg	8.160	0	10.608
	Taiwan	kg	12.844	0	9.291
	Bulgaria	kg	5.000	0	7.365
	Syria	kg	20.000	0	5.107
	Belgium	kg	2.771	0	3.951
	Canada	kg	264	0	3.103
	Romania	kg	1.764	0	2.111
	Finland	kg	54	0	776
	Switzerland	kg	2	0	260
	Austria	kg	25	0	227
	Saudi Arabia	kg	6	0	190
			13.920.094	0	18.831.158
Residues of minerals and oils	Venezuela	kg	1.144.329.069	0	113.903.097
	U.S.A.	kg	563.725.818	0	59.294.098
	Egypt	kg	85.120.704	0	11.278.483
	Aruba	kg	103.107.066	0	10.633.278
	Romania	kg	41.858.240	0	10.131.570
	Italy	kg	56.290.900	0	5.785.549
	Greece	kg	4.398.379	0	1.417.961
	Germany	kg	974.981	0	597.289
	Russian Federation	kg	5.560.350	0	487.921
	United Kingdom	kg	320.000	0	154.817
	Iran	kg	179.939	0	73.821
	Slovenia	kg	40.677	0	42.656
	China	kg	100.000	0	35.000

	Japan	kg	25.600	0	29.868
			2.006.031.723	0	213.865.408
Bitumen and asphalt	Canada	kg	132.889	0	173.497
	U.S.A.	kg	88.300	0	81.362
	Syria	kg	345.980	0	32.969
	Belgium	kg	6.738	0	26.542
	Iran	kg	161.500	0	11.823
	Israel	kg	32.357	0	11.810
	Austria	kg	8.100	0	8.015
	Italy	kg	2.750	0	4.462
	U.A.E.	kg	4.582	0	2.200
	Germany	kg	25	0	241
			783.221	0	352.921
Bitumen compound	Germany	kg	1.609.144	0	1.749.080
	U.S.A.	kg	2.120.536	0	1.516.738
	Egypt	kg	3.288.929	0	1.124.678
	India	kg	1.352.860	0	745.692
	Netherlands	kg	233.583	0	473.270
	Austria	kg	214.192	0	245.474
	United Kingdom	kg	99.584	0	179.387
	Italy	kg	60.639	0	86.318
	China	kg	98.300	0	56.031
	Japan	kg	3.538	0	26.053
	Iran	kg	55.520	0	24.321
	U.A.E.	kg	16.000	0	9.603
	Israel	kg	610	0	6.550
	Sweden	kg	577	0	5.446
	Canada	kg	415	0	4.002
	Spain	kg	202	0	1.206
	Bulgaria	kg	300	0	737
	France	kg	42	0	715
	Greece	kg	1.007	0	585
	Poland	kg	25	0	347
	Switzerland	kg	40	0	238
	Portugal	kg	10	0	120
			9.156.053	0	6.256.591
Electricity	Turkmenistan	-/1000kwh	0	633.402	21.518.966
			0	633.402	21.518.966

ANNEX-II: Oil Imports of Turkey for 2008

Description	Country	Unit	Import Quantity 1	Import Quantity 2	Import (USD)
Mineral fuels, mineral oils	Russian Federation	-/m3	0	0	10.875.497.893
	Iran	-/m3	0	0	1.920.448.823
	Algeria	kg	0	0	1.674.670.251
	Azerbaijan	-/m3	0	0	499.664.305
	Nigeria	kg	0	0	442.728.086
	Egypt	kg	0	0	56.579.238
			0	0	15.469.588.596
Coal and other solid fuels	Russian Federation	kg	8.278.487.071	0	1.398.248.299
	Australia	kg	2.323.603.040	0	567.305.492
	U.S.A.	kg	1.399.789.117	0	365.482.308
	Colombia	kg	2.882.142.151	0	239.127.859
	China	kg	1.386.223.421	0	202.878.364
	South Africa	kg	1.547.588.973	0	195.699.814
	Canada	kg	888.171.031	0	182.793.956
	Ukraine	kg	609.371.275	0	124.183.954
	Venezuela	kg	37.844.664	0	8.591.638
	Georgia	kg	58.623.200	0	7.374.819
	Iran	kg	52.530.653	0	7.272.316
	Mozambique	kg	24.736.692	0	3.549.774
	Germany	kg	80.000	0	48.107
	United Kingdom	kg	28.900	0	17.141
	Poland	kg	81.029	0	8.277
	Indonesia	kg	2.698	0	4.347
			19.489.303.915	0	3.302.586.465
Lignite	Kazakhstan	kg	271.000	0	25.755
			271.000	0	25.755
Turb	Germany	kg	12.272.604	0	3.183.064
	Latvia	kg	9.516.213	0	2.877.139
	Lithuania	kg	8.078.222	0	2.015.914
	Finland	kg	4.812.905	0	1.774.957
	Russian Federation	kg	2.813.455	0	635.853
	Estonia	kg	1.977.115	0	551.249
	China	kg	900.827	0	437.856
	Netherlands	kg	1.020.887	0	293.201
	Belarus	kg	1.688.940	0	261.233
	Sri Lanka	kg	366.835	0	198.876
	India	kg	45.000	0	16.353
	Greece	kg	23.680	0	8.673
	Belgium	kg	11.836	0	7.820
	Ukraine	kg	41.338	0	6.538
	Ireland	kg	22.300	0	5.786
	Denmark	kg	19.757	0	3.418
	Italy	kg	1.630	0	1.914
	Canada	kg	432	0	1.751
	France	kg	6		123
			43.613.982	0	12.281.718

Other Coals (from coal and lignite)	Ukraine	kg	141.189.026	0	58.490.989
	China	kg	17.113.732	0	12.426.172
	Romania	kg	23.682.967	0	7.729.937
	Italy	kg	11.121.907	0	6.265.092
	Russian Federation	kg	9.085.458	0	5.230.649
	Bosnia and Herzegovina	kg	10.789.158	0	4.770.509
	Germany	kg	2.432.489	0	1.916.713
	Iran	kg	327.245	0	28.117
	Czech Republic	kg	24.160	0	18.723
	U.S.A.	kg	2	0	2.193
			215.766.144	0	96.879.094
City gas, coal gas and other gases	Switzerland	kg/1000m3	8	16	3.846
			8	16	3.846
Bitumen (from coal and lignite)	United Kingdom	kg	54.000	0	54.807
			54.000	0	54.807
Other oils (from bitumen)	Ukraine	kg	4.344.000	0	4.331.972
	Belgium	kg	1.703.017	0	2.305.463
	Portugal	kg	1.663.161	0	2.006.149
	Spain	kg	1.816.459	0	1.949.683
	Israel	kg	1.390.993	0	1.678.787
	Bosnia and Herzegovina	kg	362.120	0	412.434
	Czech Republic	kg	332.800	0	368.987
	Netherlands	kg	77.986	0	147.808
	Germany	kg	68.341	0	107.426
	Bulgaria	kg	106.220	0	103.410
	Italy	kg	29.158	0	75.526
	Egypt	kg	60.000	0	66.000
	United Kingdom	kg	34.260	0	50.120
	France	kg	5.800	0	13.256
	U.S.A.	kg	2.436	0	6.856
	Ireland	kg	1.100	0	2.796
	Japan	kg	21	0	507
	Algeria	kg	4	0	320
			11.997.876	0	13.627.500
Soft coal	Iran	kg	4.298.329	0	1.876.983
	Egypt	kg	3.867.345	0	1.479.198
	Germany	kg	143.156	0	154.589
			8.308.830	0	3.510.770
Crude oil	Iran	kg	7.999.647.525	0	5.610.756.372
	Russian Federation	kg	7.099.260.230	0	5.179.928.598
	Saudi Arabia	kg	3.371.134.011	0	2.413.471.514
	Iraq	kg	1.659.750.542	0	1.187.866.791
	Kazakhstan	kg	581.546.504	0	470.861.826
	Italy	kg	447.163.233	0	329.488.846
	Syria	kg	515.654.761	0	315.515.290
	Azerbaijan	kg	76.799.001	0	65.921.506

	United Kingdom	kg	82.515.264	0	65.111.640
			21.833.471.071	0	15.638.922.383
Oil (from petroleum and bitumen)	Russian Federation	kg	4.960.894.163	0	5.062.152.571
	U.S.A.	kg	903.092.020	0	965.871.275
	France	kg	528.697.878	0	663.352.410
	Italy	kg	562.192.219	0	578.034.537
	Romania	kg	447.559.806	0	359.721.936
	Greece	kg	330.161.621	0	350.211.188
	Bulgaria	kg	262.263.453	0	264.112.179
	Azerbaijan	kg	227.607.549	0	239.444.154
	Turkmenistan	kg	204.056.324	0	210.504.243
	Israel	kg	204.247.157	0	203.693.532
	Netherlands	kg	158.374.754	0	195.762.571
	South Korea	kg	165.393.199	0	167.001.809
	Syria	kg	199.278.289	0	158.885.797
	Georgia	kg	155.306.792	0	154.470.563
	Malta	kg	147.440.521	0	130.795.701
	Romania	kg/1000lıtre	126.066.945	167.175	118.138.431
	Iraq	kg	210.491.380	0	107.980.794
	India	kg	115.138.894	0	107.099.219
	Italy	kg/1000lıtre	95.136.272	128.890	99.899.234
	Ukraine	kg	71.291.850	0	89.779.619
	Spain	kg	92.937.355	0	65.982.036
	Libya	kg	101.650.981	0	59.463.881
	Bahamas	kg	43.160.775	0	53.497.917
	North Korea	kg	51.186.085	0	48.572.265
	Germany	kg	24.371.827	0	46.473.783
	Taiwan	kg	52.536.333	0	42.542.196
	Belarus	kg	30.797.745	0	37.823.286
	Israel	kg/1000lıtre	37.472.277	51.016	35.666.177
	Egypt	kg	28.131.491	0	32.839.191
	Uzbekistan	kg	29.625.353	0	32.670.324
	Bulgaria	kg/1000lıtre	26.976.276	35.882	30.906.172
	U.A.E.	kg	43.819.811	0	29.798.697
	Sweden	kg	19.700.082	0	29.589.900
	Belgium	kg	18.556.441	0	29.474.339
	United Kingdom	kg	14.461.602	0	23.233.661
	Singapore	kg	19.626.284	0	22.763.352
	Saudi Arabia	kg	34.281.709	0	16.767.963
	Japan	kg	21.166.423	0	16.754.114
	Portugal	kg	12.593.490	0	15.888.026
	Albania	kg	12.981.582	0	13.128.627
	France	kg/1000lıtre	9.600.126	12.861	12.697.342
	Canada	kg	10.771.337	0	12.171.076
	Kazakhstan	kg	8.012.057	0	9.986.871
	Iran	kg	10.421.753	0	9.201.107
	Denmark	kg	20.790.832	0	9.149.246
	Poland	kg	6.914.901	0	8.804.233
	Austria	kg	1.760.044	0	5.275.357
	Greece	kg/1000lıtre	4.496.871	6.079	4.622.419
	Morocco	kg	4.162.262	0	4.587.581

	Finland	kg	3.431.829	0	4.168.457
	Croatia	kg	810.084	0	1.352.051
	Switzerland	kg	194.937	0	1.029.457
	Hungary	kg	447.700	0	711.113
	Thailand	kg	18.116	0	63.264
	China	kg	18.924	0	57.864
	Norway	kg	31.147	0	50.679
	Mexico	kg	8.374	0	47.393
	Germany	kg/1000lıtre	24.300	28	36.750
	Australia	kg	2.246	0	29.243
	United Kingdom	kg/1000lıtre	16.694	26	24.441
	Indonesia	kg	14.136	0	22.476
	Serbia	kg	10.700	0	19.215
	Vietnam	kg	1.585	0	12.061
	Czech Republic	kg	1.600	0	11.321
	U.S.A.	kg/1000lıtre	6.847	11	7.600
	South Africa	kg	300	0	1.443
	Ethiopia	kg	70	0	613
	Luxembourg	kg	25	0	540
	Ireland	kg	1	0	141
			10.872.694.806	401.968	10.994.889.024
Oil gases and other hydro-carbon gases	Algeria	kg	1.470.092.555	0	1.240.383.942
	Norway	kg	319.600.513	0	268.405.543
	Libya	kg	256.915.425	0	212.472.812
	Kazakhstan	kg	233.067.178	0	196.366.994
	Russian Federation	kg	247.963.812	0	194.615.491
	U.A.E.	kg	106.543.757	0	76.668.274
	Nigeria	kg	58.668.036	0	36.457.055
	Qatar	kg	37.101.150	0	31.265.847
	France	kg	29.729.707	0	19.560.093
	Italy	kg	17.395.427	0	16.007.130
	Saudi Arabia	kg	17.281.466	0	15.667.838
	Angola	kg	21.005.466	0	15.523.071
	Egypt	kg	11.127.718	0	9.625.946
	Trinidad ve Tobago	kg	15.130.880	0	8.208.416
	Liberya	kg	3.528.552	0	3.102.973
	Nijer	kg	6.050.000	0	2.230.761
	U.S.A.	kg	290.475	0	1.094.592
	Equatorial Guinea	kg	1.000.000	0	821.000
	Ukraine	kg	1.822.287	0	652.085
	Germany	kg	16.949	0	214.883
	Netherlands	kg	273.180	0	172.125
	Greece	kg	20.890	0	67.014
	United Kingdom	kg	4.121	0	41.547
	Iran	kg	20.000	0	18.363
	Switzerland	kg	13.683	0	15.824
	Belgium	kg	277	0	12.330
	South Korea	kg	64	0	5.121
	Ireland	kg	7	0	2.162
	Austria	kg	80	0	816

	Finland	kg	3	0	600
			2.854.663.658	0	2.349.680.648
Vaseline, paraffin, other waxes	Egypt	kg	6.245.278	0	7.352.974
	Germany	kg	1.581.624	0	4.667.522
	Spain	kg	1.816.300	0	3.643.573
	South Korea	kg	1.513.756	0	2.731.838
	South Africa	kg	904.160	0	2.135.422
	Netherlands	kg	689.214	0	1.870.239
	Iran	kg	1.315.132	0	1.425.629
	China	kg	349.547	0	631.006
	United Kingdom	kg	174.845	0	519.901
	U.S.A.	kg	169.210	0	406.981
	Italy	kg	139.544	0	400.931
	India	kg	238.260	0	360.985
	Hungary	kg	133.620	0	249.606
	Hong Kong	kg	113.180	0	150.810
	Japan	kg	69.366	0	145.494
	Malasia	kg	60.050	0	140.637
	Taiwan	kg	104.000	0	132.392
	Greece	kg	14.000	0	105.414
	France	kg	24.016	0	99.115
	Israel	kg	37.710	0	67.661
	Slovenia	kg	49.140	0	56.516
	Croatia	kg	25.200	0	47.290
	Denmark	kg	1.950	0	5.751
	Slovakia	kg	250	0	2.915
	Austria	kg	600	0	1.777
	Finland	kg	410	0	1.449
	Poland	kg	415	0	559
	Belgium	kg	220	0	257
	Sweden	kg	20	0	122
			15.771.017	0	27.354.766
Residues of minerals and oils	Venezuela	kg	1.194.839.189	0	176.624.311
	U.S.A.	kg	674.270.643	0	98.613.758
	Aruba	kg	229.425.800	0	36.075.738
	Egypt	kg	124.288.683	0	20.782.548
	Romania	kg	26.029.850	0	11.185.215
	Greece	kg	3.444.813	0	2.301.897
	Italy	kg	11.268.400	0	1.503.661
	Germany	kg	784.864	0	663.590
	Iran	kg	613.440	0	364.365
	United Kingdom	kg	435.000	0	278.404
	Japan	kg	89.600	0	126.709
	Uzbekistan	kg	318.000	0	124.571
	Slovenia	kg	18.993	0	22.936
	France	kg	17.684	0	21.258
			2.265.844.959	0	348.688.961
Bitumen and asphalt	Syria	kg	642.510	0	112.747
	U.S.A.	kg	80.100	0	107.551

	Austria	kg	5.790	0	6.704
	Denmark	kg	580	0	1.674
	Germany	kg	180	0	1.464
			729.160	0	230.140
Bitumen compound	Egypt	kg	4.518.864	0	2.874.317
	Germany	kg	2.136.550	0	2.782.170
	U.S.A.	kg	227.280	0	452.026
	Austria	kg	331.920	0	426.503
	Netherlands	kg	245.105	0	314.880
	United Kingdom	kg	166.817	0	282.617
	Greece	kg	148.229	0	113.952
	U.A.E.	kg	49.500	0	37.741
	Italy	kg	27.098	0	36.116
	Belgium	kg	21.677	0	26.301
	Japan	kg	12.675	0	17.124
	France	kg	5.205	0	9.072
	Israel	kg	848	0	5.670
	Canada	kg	180	0	1.126
	Bahrain	kg	85	0	665
	South Korea	kg	210	0	573
	Sweden	kg	16	0	150
			7.892.259	0	7.381.003
Electricity	Turkmenistan	-/1000kwh	0	450.391	15.487.958
			0	450.391	15.487.958

ANNEX-I: Oil Imports of Turkey for 2007

Description	Country	Unit	Import Quantity 1	Import Quantity 2	Import (USD)
Mineral fuels, mineral oils	Russian Federation	-/m3	0	2.459.430.901	6.560.101.240
	Iran	-/m3	0	348.874.140	1.756.977.490
	Algeria	kg	352.325.265	0	1.164.683.086
	Nigeria	kg	110.828.960	0	346.595.983
	Azerbaijan	-/m3	0	0	144.147.351
	Egypt	kg	0	0	26.944.947
			463.154.228	2.808.305.041	9.999.450.097
Coal and other solid fuels	Russian Federation	kg	9.875.929.844	0	1.159.972.773
	South Africa	kg	2.499.080.953	0	245.606.549
	Australia	kg	1.755.881.760	0	224.868.857
	China	kg	1.946.729.224	0	223.956.577
	U.S.A.	kg	1.637.679.250	0	219.772.898
	Canada	kg	1.376.052.876	0	183.691.196
	Colombia	kg	2.754.472.917	0	174.832.003
	Ukraine	kg	707.366.681	0	91.304.501
	Austria	kg	164.639.000	0	16.955.900
	Iran	kg	112.775.788	0	7.690.156
	Mozambique	kg	45.887.348	0	6.055.775
	Georgia	kg	54.393.000	0	4.037.088
	Italy	kg	11.363.740	0	852.281
	Vietnam	kg	3.239.646	0	826.110
	United Kingdom	kg	27.500	0	17.786
	Netherlands	kg	14.400	0	11.476
	Germany	kg	14.600	0	10.388
			22.945.548.527	0	2.560.462.314
Turb	Germany	kg	14.021.329	0	2.914.420
	Latvia	kg	8.488.510	0	2.156.540
	Lithuania	kg	8.952.078	0	1.842.417
	Finland	kg	3.667.842	0	1.157.882
	Estonia	kg	2.401.300	0	616.018
	Russian Federation	kg	942.378	0	151.479
	Netherlands	kg	482.000	0	128.076
	China	kg	252.028	0	95.965
	Sri Lanka	kg	242.594	0	78.629
	Belarus	kg	399.306	0	37.869
	U.S.A.	kg	13.832	0	23.815
	Belgium	kg	48.253	0	20.897
	Ukraine	kg	98.346	0	18.217
	Bulgaria	kg	60.339	0	12.498
	Costa Rica	kg	24.447	0	7.495
	Denmark	kg	68	0	605
	Italy	kg	91	0	365
	Canada	kg	65	0	224
			40.094.806	0	9.263.411
Other Coals (from coal and lignite)	Egypt	kg	299.896.803	0	63.179.681
	Ukraine	kg	72.682.334	0	12.474.268

	China	kg	24.709.452	0	7.847.616
	Italy	kg	16.122.588	0	5.075.947
	Russian Federation	kg	16.424.473	0	3.396.239
	Belgium	kg	5.944.450	0	2.169.724
	Germany	kg	1.102.799	0	868.914
	Romania	kg	3.962.850	0	486.352
	Bosnia and Herzegovina	kg	706.700	0	185.680
	Spain	kg	44.000	0	20.309
	Iran	kg	63.610	0	10.178
	U.S.A.	kg	5.506	0	4.123
	Colombia	kg	10	0	305
			441.665.575	0	95.719.336
City gas, coal gas and other gases	Germany	kg/1000 m3	74	144	7.480
	Switzerland	kg/1000 m3	1	6	1.236
			75	150	8.716
Bitumen (from coal and lignite)	United Kingdom	kg	59.175	0	51.325
			59.175	0	51.325
Other oils (from bitumen)	Spain	kg	3.117.030	0	2.761.952
	Israel	kg	2.836.032	0	2.445.663
	Belgium	kg	1.564.964	0	1.809.474
	Portugal	kg	1.179.248	0	1.058.203
	Ukraine	kg	690.000	0	652.358
	Bosnia and Herzegovina	kg	460.540	0	449.624
	Denmark	kg	168.000	0	178.648
	Netherlands	kg	62.680	0	90.250
	Germany	kg	32.429	0	78.693
	Italy	kg	11.945	0	28.024
	U.S.A.	kg	18.177	0	20.003
	Greece	kg	6.052	0	10.599
			10.147.097	0	9.583.491
Soft Coal	Iran	kg	14.910.953	0	6.624.783
	Egypt	kg	533.700	0	204.358
	Germany	kg	125.125	0	149.634
	Bosnia and Herzegovina	kg	100	0	163
			15.569.878	0	6.978.938
Crude Oil	Russian Federation	kg	9.501.341.344	0	4.885.019.654
	Iran	kg	8.846.742.613	0	4.194.791.430
	Saudi Arabia	kg	3.284.926.084	0	1.704.286.437
	Iraq	kg	897.797.870	0	526.408.508
	Italy	kg	391.719.828	0	216.693.038
	Libya	kg	279.277.564	0	139.334.550
	Syria	kg	243.959.133	0	117.676.757
			23.445.764.436	0	11.784.210.374
Oil (from petroleum and bitumen)	Russian Federation	kg	6.200.178.983	0	4.356.743.132
	Greece	kg	308.296.835	0	251.920.792
	Romania	kg	334.309.605	429.460	249.662.501

	Ukraine	kg	276.829.094	0	195.670.243
	South Korea	kg	263.378.107	0	193.306.502
	Romania	kg	290.030.538	0	186.238.926
	Italy	kg	252.027.182	0	174.811.433
	Bulgaria	kg	244.604.231	0	173.175.773
	Turkmenistan	kg	231.470.953	0	164.625.966
	Syria	kg	216.997.573	0	141.739.426
	Netherlands	kg	153.059.380	0	118.776.032
	Israel	kg/1000litre	151.058.971	199.696	113.102.272
	France	kg	91.291.662	0	79.076.418
	Azerbaijan	kg	108.781.585	0	77.880.047
	Iraq	kg	192.733.470	0	68.936.340
	India	kg	71.276.602	0	64.716.444
	Spain	kg	153.698.733	0	62.241.326
	Israel	kg	81.720.928	0	61.839.466
	U.S.A.	kg	100.042.204	0	56.745.255
	Malta	kg	70.211.161	0	55.393.033
	Greece	kg/1000litre	68.432.536	91.629	53.618.201
	Georgia	kg	65.268.028	0	41.190.282
	Algeria	kg	60.615.028	0	37.257.244
	United Kingdom	kg	47.434.380	0	34.251.877
	Latvia	kg	40.708.312	0	27.513.809
	Germany	kg	13.345.325	0	26.187.800
	Belgium	kg	20.849.145	0	24.992.150
	Sweden	kg	25.610.738	0	23.879.085
	Singapore	kg	36.248.117	0	20.459.660
	Norway	kg	45.003.415	0	19.990.048
	Countries and Territories not Determined	kg	31.858.301	0	18.870.389
	Belarus	kg	26.263.503	0	17.503.839
	Libya	kg	22.819.478	0	15.882.295
	Albania	kg	21.799.276	0	14.672.196
	Uzbekistan	kg	17.550.658	0	13.699.527
	Oman	kg	19.993.509	0	12.535.261
	France	kg/1000litre	11.870.412	13.512	11.491.958
	Portugal	kg	10.895.515	0	8.715.073
	Egypt	kg	9.336.303	0	8.587.229
	Bulgaria	kg/1000litre	7.846.070	10.441	5.821.596
	Austria	kg	1.321.343	0	3.718.655
	Croatia	kg	4.514.775	0	3.662.691
	Lithuania	kg	3.776.518	0	2.833.003
	Finland	kg	709.626	0	1.118.502
	Saudi Arabia	kg	1.273.163	0	949.966
	Switzerland	kg	140.263	0	675.985
	Japan	kg	147.852	0	659.342
	Brasil	kg	1.814.944	0	543.848
	Congo	kg	1.483.533	0	444.541
	Hungary	kg	195.687	0	301.502
	Iran	kg	591.088	0	296.683
	Canada	kg	77.402	0	224.863

	Taiwan	kg	99.395	0	141.442
	Thailand	kg	18.148	0	61.188
	Italy	kg/1000litre	2.847	3	40.791
	U.A.E.	kg	11.801	0	39.286
	Mauritania	kg	6.427	0	37.764
	Australia	kg	2.512	0	28.554
	United Kingdom	kg/1000litre	34.998	47	26.941
	Mexico	kg	3.923	0	18.126
	U.S.A.	kg/1000litre	18.129	20	12.126
	Spain	kg/1000litre	850	1	5.835
	South Africa	kg	1.500	0	5.577
	Denmark	kg	225	0	4.069
	Czech Republic	kg	640	0	3.881
	Germany	kg/1000litre	4.188	4	3.644
	Kazakhstan	kg/1000litre	1.480	2	3.184
	Ireland	kg	311	0	2.757
	Poland	kg	78	0	952
	China	kg	157	0	719
	Kazakhstan	kg	8	0	492
	Netherlands	kg/1000litre	550	3	468
			10.412.000.207	744.818	7.299.588.223
Oil gases and other hydro-carbon gases	Algeria	kg	1.188.769.208	0	765.346.751
	Norway	kg	310.317.684	0	196.677.909
	Kazakhstan	kg	257.926.057	0	170.199.175
	Libya	kg	244.008.690	0	144.475.208
	Nigeria	kg	189.831.959	0	125.706.411
	Russian Federation	kg	186.826.461	0	117.120.226
	U.A.E.	kg	116.731.442	0	83.434.451
	Saudi Arabia	kg	110.243.214	0	71.991.018
	Iran	kg	66.995.444	0	44.659.602
	Equatorial Guinea	kg	76.316.678	0	44.646.233
	Italy	kg	46.107.923	0	27.860.929
	United Kingdom	kg	32.605.474	0	19.783.179
	Ukraine	kg	27.347.894	0	15.191.917
	Arjantin	kg	19.931.574	0	10.911.412
	Egypt	kg	16.796.437	0	10.401.542
	France	kg	6.393.024	0	3.711.146
	Germany	kg	1.989.190	0	1.436.822
	Qatar	kg	2.500.000	0	1.391.556
	U.S.A.	kg	331.123	0	861.983
	Greece	kg	2.503.678	0	623.702
	Turkmenistan	kg	444.177	0	364.488
	Switzerland	kg	150.000	0	98.594
	Netherlands	kg	42.840	0	72.761
	South Korea	kg	43.512	0	15.903
	Belgium	kg	4.770	0	5.211

	Ireland	kg	1.400	0	2.951
	Austria	kg	43	0	1.292
	Finland	kg	1	0	585
	China	kg	15	0	400
			2.905.159.912	0	1.856.993.357
Vaseline, paraffin, other waxes	Egypt	kg	6.966.998	0	5.397.016
	Germany	kg	1.632.710	0	3.993.503
	Spain	kg	1.629.616	0	2.726.632
	Netherlands	kg	866.762	0	2.047.779
	South Africa	kg	580.705	0	1.169.474
	South Korea	kg	689.320	0	1.034.632
	Malasia	kg	300.000	0	541.156
	Italy	kg	278.422	0	433.850
	United Kingdom	kg	154.149	0	381.032
	China	kg	219.240	0	245.959
	India	kg	90.580	0	161.541
	U.S.A.	kg	39.982	0	156.143
	Russian Federation	kg	119.880	0	121.337
	Japan	kg	67.320	0	114.067
	France	kg	18.950	0	80.084
	Thailand	kg	35.700	0	56.390
	Iran	kg	131.000	0	54.584
	Denmark	kg	41.570	0	43.700
	Hungary	kg	4.300	0	14.740
	Greece	kg	2.000	0	14.550
	Israel	kg	8.160	0	10.608
	Taiwan	kg	12.844	0	9.291
	Bulgaria	kg	5.000	0	7.365
	Syria	kg	20.000	0	5.107
	Belgium	kg	2.771	0	3.951
	Canada	kg	264	0	3.103
	Romania	kg	1.764	0	2.111
	Finland	kg	54	0	776
	Switzerland	kg	2	0	260
	Austria	kg	25	0	227
	Saudi Arabia	kg	6	0	190
			13.920.094	0	18.831.158
Residues of minerals and oils	Venezuela	kg	1.144.329.069	0	113.903.097
	U.S.A.	kg	563.725.818	0	59.294.098
	Egypt	kg	85.120.704	0	11.278.483
	Aruba	kg	103.107.066	0	10.633.278
	Romania	kg	41.858.240	0	10.131.570
	Italy	kg	56.290.900	0	5.785.549
	Greece	kg	4.398.379	0	1.417.961
	Germany	kg	974.981	0	597.289
	Russian Federation	kg	5.560.350	0	487.921
	United Kingdom	kg	320.000	0	154.817
	Iran	kg	179.939	0	73.821
	Slovenia	kg	40.677	0	42.656
	China	kg	100.000	0	35.000

	Japan	kg	25.600	0	29.868
			2.006.031.723	0	213.865.408
Bitumen and asphalt	Canada	kg	132.889	0	173.497
	U.S.A.	kg	88.300	0	81.362
	Syria	kg	345.980	0	32.969
	Belgium	kg	6.738	0	26.542
	Iran	kg	161.500	0	11.823
	Israel	kg	32.357	0	11.810
	Austria	kg	8.100	0	8.015
	Italy	kg	2.750	0	4.462
	U.A.E.	kg	4.582	0	2.200
	Germany	kg	25	0	241
			783.221	0	352.921
Bitumen compound	Germany	kg	1.609.144	0	1.749.080
	U.S.A.	kg	2.120.536	0	1.516.738
	Egypt	kg	3.288.929	0	1.124.678
	India	kg	1.352.860	0	745.692
	Netherlands	kg	233.583	0	473.270
	Austria	kg	214.192	0	245.474
	United Kingdom	kg	99.584	0	179.387
	Italy	kg	60.639	0	86.318
	China	kg	98.300	0	56.031
	Japan	kg	3.538	0	26.053
	Iran	kg	55.520	0	24.321
	U.A.E.	kg	16.000	0	9.603
	Israel	kg	610	0	6.550
	Sweden	kg	577	0	5.446
	Canada	kg	415	0	4.002
	Spain	kg	202	0	1.206
	Bulgaria	kg	300	0	737
	France	kg	42	0	715
	Greece	kg	1.007	0	585
	Poland	kg	25	0	347
	Switzerland	kg	40	0	238
	Portugal	kg	10	0	120
			9.156.053	0	6.256.591
Electricity	Turkmenistan	-/1000kwh	0	633.402	21.518.966
			0	633.402	21.518.966

ANNEX-II: Oil Imports of Turkey for 2008

Description	Country	Unit	Import Quantity 1	Import Quantity 2	Import (USD)
Mineral fuels, mineral oils	Russian Federation	-/m3	0	0	10.875.497.893
	Iran	-/m3	0	0	1.920.448.823
	Algeria	kg	0	0	1.674.670.251
	Azerbaijan	-/m3	0	0	499.664.305
	Nigeria	kg	0	0	442.728.086
	Egypt	kg	0	0	56.579.238
			0	0	15.469.588.596
Coal and other solid fuels	Russian Federation	kg	8.278.487.071	0	1.398.248.299
	Australia	kg	2.323.603.040	0	567.305.492
	U.S.A.	kg	1.399.789.117	0	365.482.308
	Colombia	kg	2.882.142.151	0	239.127.859
	China	kg	1.386.223.421	0	202.878.364
	South Africa	kg	1.547.588.973	0	195.699.814
	Canada	kg	888.171.031	0	182.793.956
	Ukraine	kg	609.371.275	0	124.183.954
	Venezuela	kg	37.844.664	0	8.591.638
	Georgia	kg	58.623.200	0	7.374.819
	Iran	kg	52.530.653	0	7.272.316
	Mozambique	kg	24.736.692	0	3.549.774
	Germany	kg	80.000	0	48.107
	United Kingdom	kg	28.900	0	17.141
	Poland	kg	81.029	0	8.277
	Indonesia	kg	2.698	0	4.347
			19.489.303.915	0	3.302.586.465
Lignite	Kazakhstan	kg	271.000	0	25.755
			271.000	0	25.755
Turb	Germany	kg	12.272.604	0	3.183.064
	Latvia	kg	9.516.213	0	2.877.139
	Lithuania	kg	8.078.222	0	2.015.914
	Finland	kg	4.812.905	0	1.774.957
	Russian Federation	kg	2.813.455	0	635.853
	Estonia	kg	1.977.115	0	551.249
	China	kg	900.827	0	437.856
	Netherlands	kg	1.020.887	0	293.201
	Belarus	kg	1.688.940	0	261.233
	Sri Lanka	kg	366.835	0	198.876
	India	kg	45.000	0	16.353
	Greece	kg	23.680	0	8.673
	Belgium	kg	11.836	0	7.820
	Ukraine	kg	41.338	0	6.538
	Ireland	kg	22.300	0	5.786
	Denmark	kg	19.757	0	3.418
	Italy	kg	1.630	0	1.914
	Canada	kg	432	0	1.751
	France	kg	6		123
			43.613.982	0	12.281.718

Other Coals (from coal and lignite)	Ukraine	kg	141.189.026	0	58.490.989
	China	kg	17.113.732	0	12.426.172
	Romania	kg	23.682.967	0	7.729.937
	Italy	kg	11.121.907	0	6.265.092
	Russian Federation	kg	9.085.458	0	5.230.649
	Bosnia and Herzegovina	kg	10.789.158	0	4.770.509
	Germany	kg	2.432.489	0	1.916.713
	Iran	kg	327.245	0	28.117
	Czech Republic	kg	24.160	0	18.723
	U.S.A.	kg	2	0	2.193
			215.766.144	0	96.879.094
City gas, coal gas and other gases	Switzerland	kg/1000m3	8	16	3.846
			8	16	3.846
Bitumen (from coal and lignite)	United Kingdom	kg	54.000	0	54.807
			54.000	0	54.807
Other oils (from bitumen)	Ukraine	kg	4.344.000	0	4.331.972
	Belgium	kg	1.703.017	0	2.305.463
	Portugal	kg	1.663.161	0	2.006.149
	Spain	kg	1.816.459	0	1.949.683
	Israel	kg	1.390.993	0	1.678.787
	Bosnia and Herzegovina	kg	362.120	0	412.434
	Czech Republic	kg	332.800	0	368.987
	Netherlands	kg	77.986	0	147.808
	Germany	kg	68.341	0	107.426
	Bulgaria	kg	106.220	0	103.410
	Italy	kg	29.158	0	75.526
	Egypt	kg	60.000	0	66.000
	United Kingdom	kg	34.260	0	50.120
	France	kg	5.800	0	13.256
	U.S.A.	kg	2.436	0	6.856
	Ireland	kg	1.100	0	2.796
	Japan	kg	21	0	507
	Algeria	kg	4	0	320
			11.997.876	0	13.627.500
Soft coal	Iran	kg	4.298.329	0	1.876.983
	Egypt	kg	3.867.345	0	1.479.198
	Germany	kg	143.156	0	154.589
			8.308.830	0	3.510.770
Crude oil	Iran	kg	7.999.647.525	0	5.610.756.372
	Russian Federation	kg	7.099.260.230	0	5.179.928.598
	Saudi Arabia	kg	3.371.134.011	0	2.413.471.514
	Iraq	kg	1.659.750.542	0	1.187.866.791
	Kazakhstan	kg	581.546.504	0	470.861.826
	Italy	kg	447.163.233	0	329.488.846
	Syria	kg	515.654.761	0	315.515.290
	Azerbaijan	kg	76.799.001	0	65.921.506

	United Kingdom	kg	82.515.264	0	65.111.640
			21.833.471.071	0	15.638.922.383
Oil (from petroleum and bitumen)	Russian Federation	kg	4.960.894.163	0	5.062.152.571
	U.S.A.	kg	903.092.020	0	965.871.275
	France	kg	528.697.878	0	663.352.410
	Italy	kg	562.192.219	0	578.034.537
	Romania	kg	447.559.806	0	359.721.936
	Greece	kg	330.161.621	0	350.211.188
	Bulgaria	kg	262.263.453	0	264.112.179
	Azerbaijan	kg	227.607.549	0	239.444.154
	Turkmenistan	kg	204.056.324	0	210.504.243
	Israel	kg	204.247.157	0	203.693.532
	Netherlands	kg	158.374.754	0	195.762.571
	South Korea	kg	165.393.199	0	167.001.809
	Syria	kg	199.278.289	0	158.885.797
	Georgia	kg	155.306.792	0	154.470.563
	Malta	kg	147.440.521	0	130.795.701
	Romania	kg/1000lıtre	126.066.945	167.175	118.138.431
	Iraq	kg	210.491.380	0	107.980.794
	India	kg	115.138.894	0	107.099.219
	Italy	kg/1000lıtre	95.136.272	128.890	99.899.234
	Ukraine	kg	71.291.850	0	89.779.619
	Spain	kg	92.937.355	0	65.982.036
	Libya	kg	101.650.981	0	59.463.881
	Bahamas	kg	43.160.775	0	53.497.917
	North Korea	kg	51.186.085	0	48.572.265
	Germany	kg	24.371.827	0	46.473.783
	Taiwan	kg	52.536.333	0	42.542.196
	Belarus	kg	30.797.745	0	37.823.286
	Israel	kg/1000lıtre	37.472.277	51.016	35.666.177
	Egypt	kg	28.131.491	0	32.839.191
	Uzbekistan	kg	29.625.353	0	32.670.324
	Bulgaria	kg/1000lıtre	26.976.276	35.882	30.906.172
	U.A.E.	kg	43.819.811	0	29.798.697
	Sweden	kg	19.700.082	0	29.589.900
	Belgium	kg	18.556.441	0	29.474.339
	United Kingdom	kg	14.461.602	0	23.233.661
	Singapore	kg	19.626.284	0	22.763.352
	Saudi Arabia	kg	34.281.709	0	16.767.963
	Japan	kg	21.166.423	0	16.754.114
	Portugal	kg	12.593.490	0	15.888.026
	Albania	kg	12.981.582	0	13.128.627
	France	kg/1000lıtre	9.600.126	12.861	12.697.342
	Canada	kg	10.771.337	0	12.171.076
	Kazakhstan	kg	8.012.057	0	9.986.871
	Iran	kg	10.421.753	0	9.201.107
	Denmark	kg	20.790.832	0	9.149.246
	Poland	kg	6.914.901	0	8.804.233
	Austria	kg	1.760.044	0	5.275.357
	Greece	kg/1000lıtre	4.496.871	6.079	4.622.419
	Morocco	kg	4.162.262	0	4.587.581

	Finland	kg	3.431.829	0	4.168.457
	Croatia	kg	810.084	0	1.352.051
	Switzerland	kg	194.937	0	1.029.457
	Hungary	kg	447.700	0	711.113
	Thailand	kg	18.116	0	63.264
	China	kg	18.924	0	57.864
	Norway	kg	31.147	0	50.679
	Mexico	kg	8.374	0	47.393
	Germany	kg/1000lıtre	24.300	28	36.750
	Australia	kg	2.246	0	29.243
	United Kingdom	kg/1000lıtre	16.694	26	24.441
	Indonesia	kg	14.136	0	22.476
	Serbia	kg	10.700	0	19.215
	Vietnam	kg	1.585	0	12.061
	Czech Republic	kg	1.600	0	11.321
	U.S.A.	kg/1000lıtre	6.847	11	7.600
	South Africa	kg	300	0	1.443
	Ethiopia	kg	70	0	613
	Luxembourg	kg	25	0	540
	Ireland	kg	1	0	141
			10.872.694.806	401.968	10.994.889.024
Oil gases and other hydro-carbon gases	Algeria	kg	1.470.092.555	0	1.240.383.942
	Norway	kg	319.600.513	0	268.405.543
	Libya	kg	256.915.425	0	212.472.812
	Kazakhstan	kg	233.067.178	0	196.366.994
	Russian Federation	kg	247.963.812	0	194.615.491
	U.A.E.	kg	106.543.757	0	76.668.274
	Nigeria	kg	58.668.036	0	36.457.055
	Qatar	kg	37.101.150	0	31.265.847
	France	kg	29.729.707	0	19.560.093
	Italy	kg	17.395.427	0	16.007.130
	Saudi Arabia	kg	17.281.466	0	15.667.838
	Angola	kg	21.005.466	0	15.523.071
	Egypt	kg	11.127.718	0	9.625.946
	Trinidad ve Tobago	kg	15.130.880	0	8.208.416
	Liberya	kg	3.528.552	0	3.102.973
	Nijer	kg	6.050.000	0	2.230.761
	U.S.A.	kg	290.475	0	1.094.592
	Equatorial Guinea	kg	1.000.000	0	821.000
	Ukraine	kg	1.822.287	0	652.085
	Germany	kg	16.949	0	214.883
	Netherlands	kg	273.180	0	172.125
	Greece	kg	20.890	0	67.014
	United Kingdom	kg	4.121	0	41.547
	Iran	kg	20.000	0	18.363
	Switzerland	kg	13.683	0	15.824
	Belgium	kg	277	0	12.330
	South Korea	kg	64	0	5.121
	Ireland	kg	7	0	2.162
	Austria	kg	80	0	816

	Finland	kg	3	0	600
			2.854.663.658	0	2.349.680.648
Vaseline, paraffin, other waxes	Egypt	kg	6.245.278	0	7.352.974
	Germany	kg	1.581.624	0	4.667.522
	Spain	kg	1.816.300	0	3.643.573
	South Korea	kg	1.513.756	0	2.731.838
	South Africa	kg	904.160	0	2.135.422
	Netherlands	kg	689.214	0	1.870.239
	Iran	kg	1.315.132	0	1.425.629
	China	kg	349.547	0	631.006
	United Kingdom	kg	174.845	0	519.901
	U.S.A.	kg	169.210	0	406.981
	Italy	kg	139.544	0	400.931
	India	kg	238.260	0	360.985
	Hungary	kg	133.620	0	249.606
	Hong Kong	kg	113.180	0	150.810
	Japan	kg	69.366	0	145.494
	Malasia	kg	60.050	0	140.637
	Taiwan	kg	104.000	0	132.392
	Greece	kg	14.000	0	105.414
	France	kg	24.016	0	99.115
	Israel	kg	37.710	0	67.661
	Slovenia	kg	49.140	0	56.516
	Croatia	kg	25.200	0	47.290
	Denmark	kg	1.950	0	5.751
	Slovakia	kg	250	0	2.915
	Austria	kg	600	0	1.777
	Finland	kg	410	0	1.449
	Poland	kg	415	0	559
	Belgium	kg	220	0	257
	Sweden	kg	20	0	122
			15.771.017	0	27.354.766
Residues of minerals and oils	Venezuela	kg	1.194.839.189	0	176.624.311
	U.S.A.	kg	674.270.643	0	98.613.758
	Aruba	kg	229.425.800	0	36.075.738
	Egypt	kg	124.288.683	0	20.782.548
	Romania	kg	26.029.850	0	11.185.215
	Greece	kg	3.444.813	0	2.301.897
	Italy	kg	11.268.400	0	1.503.661
	Germany	kg	784.864	0	663.590
	Iran	kg	613.440	0	364.365
	United Kingdom	kg	435.000	0	278.404
	Japan	kg	89.600	0	126.709
	Uzbekistan	kg	318.000	0	124.571
	Slovenia	kg	18.993	0	22.936
	France	kg	17.684	0	21.258
			2.265.844.959	0	348.688.961
Bitumen and asphalt	Syria	kg	642.510	0	112.747
	U.S.A.	kg	80.100	0	107.551

	Austria	kg	5.790	0	6.704
	Denmark	kg	580	0	1.674
	Germany	kg	180	0	1.464
			729.160	0	230.140
Bitumen compound	Egypt	kg	4.518.864	0	2.874.317
	Germany	kg	2.136.550	0	2.782.170
	U.S.A.	kg	227.280	0	452.026
	Austria	kg	331.920	0	426.503
	Netherlands	kg	245.105	0	314.880
	United Kingdom	kg	166.817	0	282.617
	Greece	kg	148.229	0	113.952
	U.A.E.	kg	49.500	0	37.741
	Italy	kg	27.098	0	36.116
	Belgium	kg	21.677	0	26.301
	Japan	kg	12.675	0	17.124
	France	kg	5.205	0	9.072
	Israel	kg	848	0	5.670
	Canada	kg	180	0	1.126
	Bahrain	kg	85	0	665
	South Korea	kg	210	0	573
	Sweden	kg	16	0	150
			7.892.259	0	7.381.003
Electricity	Turkmenistan	-/1000kwh	0	450.391	15.487.958
			0	450.391	15.487.958