# THE PLACE OF ENERGY SECURITY IN EUROPEAN UNION SECURITY AND DEFENCE POLICY

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by

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*To my grandpa, Binali KALKAN*

## APPROVAL PAGE

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Arts.

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This is to certify that I have read this thesis and that in my opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Arts.

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## AUTHOR DECLARATIONS

1. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

2. The program of advanced study of which this thesis is part has consisted of:

i) Research Methods course during the undergraduate study

ii) Examination of several thesis guides of particular universities both in Turkey and abroad as well as a professional book on this subject.

Arzu Yorkan

October, 2005

# ABSTRACT

**ARZU YORKAN** **October 2005**

## THE PLACE OF ENERGY SECURITY IN EUROPEAN UNION SECURITY AND DEFENCE POLICY

The aim of this study is to express the energy supply security policy of the European Union in its security and defence policy. This thesis consists of two chapters. The first briefly explains European security and defence policy. The latter, which can be named the heart of the thesis, covers three sections. The first is named energy security and politics: the Persian Gulf region, Russia and North Africa as main producers, and the Caspian basin as a transit region are studied by promoting energy dialogue with these countries/regions. The second is economic dimension of energy security that indicates creation of an efficient internal energy market in electricity and gas sectors at the European Community level by liberalization of these sectors, diversification of energy supply routes and establishment of an effective energy crisis management system. Finally, the last part studies on environmental aspect of energy security by explaining the obligations of the Union under the Kyoto Convention, which entail the Union to increase use of its renewable energies, improve energy efficiencies and savings and develop high energy technologies, and thus import dependecy of the Union on external supplies is reduced.

As a result, the author argues that promoting energy cooperation between the Union and its producers, establishing a truly integrated energy market at the Community level, and diversifying energy supplies and improving energy efficiencies are essential elements to secure energy supplies of the European Union. Thus, she indicates that its security of energy supplies requries civilian measures rather than military ones.



**Key words:**

EU, ESDP, Energy supply security, Energy import dependency, Energy dialogue, Internal energy market, Energy efficiency.

# KISA ÖZET

**ARZU YORKAN** **Ekim 2005**

## ENERJİ GÜVENLİĞİ'NİN AVRUPA BİRLİĞİ GÜVENLİK VE SAVUNMA POLİTİKASI İÇİNDEKİ YERİ

Bu tezin amacı Avrupa Birliği'nin enerji güvenliği politikasını kendi güvenlik ve savunma politikası içinde açıklamaya çalışmaktır. Tez iki bölümden oluşmaktadır. Birinci bölüm Avrupa'nın güvenlik ve savunma politikasını ana hatlarıyla ele almaktadır. Tezin ikinci ve ana bölümünü oluşturan enerji güvenliği konusu ise üç kısımdan oluşmaktadır. Birinci kısımda politika ve enerji güvenliği incelenmektedir, burada üretici ülkeler/bölgeler olarak Basra Körfezi ülkeleri, Rusya ve Kuzey Afrika ve transfer bölge konumundaki Hazar denizi ülkeleri ile enerji işbirliğini geliştirmek konusu ele alınmıştır. İkinci kısım enerji güvenliğinin ekonomik boyutuyla ilgilidir. Amaç elektrik ve doğal gaz sektörlerinde verimli bir iç enerji pazarı oluşturmaktır. Bu Pazar şu özellikleri içermelidir: elektrik ve doğal gaz piyasalarının rekabete açık olması, enerji yollarının (petrol ve doğal gaz boru hatları ve elektrik şebekeleri) çeşitlendirilmesi ve etkili bir kriz yönetimi sistemi geliştirilmesi. Üçüncü kısım ise enerji güvenliğinin çevre ile olan ilişkisine değiniyor. Bu kısım Avrupa Birliği'nin Kyoto Protokolü için üstlendiği yükümlülüklerinin enerji güvenliğini nasıl etkilediğini şu kriterlerle ifade emektedir: yenilenebilir enerji kaynaklarının üretiminin arttırılması; enerjinin tasarruflu ve verimli bir şekilde kullanılması; ve ileri enerji teknolojisinin geliştirilmesi, böylece Birlik Kyoto taahhütlerini yerine getirerek enerjide dışa bağımlılığını kısmi ölçüde azaltmış olacaktır.

Kısacası, yazar Avrupa Birliği'nin üretici ülke ve bölgelerle geliştirdiği enerji işbirliğini; Birlik düzeyinde kurmaya çalıştığı enerji iç pazarını; enerji kaynaklarını çeşitlendirme yolundaki çabasını; ve enerji verimliliğini arttırmasını Birliğin enerji güvenliğini garanti altına almak için oluşturduğu temel elementler olarak görmektedir. Böylece, Birliğin enerji güvenliğinin sağlanması için alınan tedbirlerin askeri değil sivil tedbirler olduğuna dikkat çekmek istiyor.



**Anahtar Kelimeler**

AB, AGSP, Enerji arz güvenliği, Enerjide dışa bağımlılık, Enerji diyalogu, İç enerji pazarı, Enerji verimliliği.

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| | |
|---|---|
| BP | British Petroleum |
| BTC | Baku-Tbilissi-Ceyhan |
| CO2 | Carbon Dioxide |
| CFSP | Common Foreign and Security Policy |
| EC | European Community |
| ECSC | European Coal and Steel Community Treaty |
| ECT | Energy Charter Treaty |
| EDC | European Defence Community |
| EEC | European Energy Charter |
| EIA | Energy Information Administration |
| EPC | European Political Community |
| ESDP | European Security and Defence Policy |
| EU | European Union |
| EUMC | European Union Military Committee |
| EUMS | European Union Military Staff |
| EUPM | European Union Police Mission |
| FSU | Former Soviet Union |
| GCC | Gulf Cooperation Council |
| HR-CFSP | High Representative of the CFSP |
| IEA | International Energy Agency |

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|---|---|
| IMO | International Maritime Organisation |
| INOGATE | Interstate Oil and Gas Transport to Europe |
| IPS/UPS | Integrated Power System/United Power System |
| LNG | Liquefied Natural Gas |
| NATO | North Atlantic Treaty Organization |
| MW | Megawatt |
| PSAs | Production Sharing Agreements |
| PSC | Political and Security Committee |
| PCAs | Partnership and Cooperation Agreements |
| RRF | Rapid Reaction Force |
| SEEERF | South East Europe Electricity Regulation Forum |
| TACIS | Technical Assistance to the Community of Independent States |
| TENs | Trans European Networks |
| TEU | Treaty of European Union |
| TRACECA | Transport Corridor Europe-Caucasia-Asia |
| UCTE | Union for the Co-ordination of Transmission of Electricity |
| UK | United Kingdom |
| US | United States of America |
| WEU | Western European Union |

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| WTO | World Trade Organization |

# ACKNOWLEDGEMENTS

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I also thank my family and my best friend, Murat Özgür, for their patience.

I should not forget my mother's important helps for my studying in a comfortable way, again many many thanks mama.

# INTRODUCTION

Energy policy of the European Union was started with the treaties of the European Coal and Steel Community Treaty of 1951 and the European Atomic Energy Community of 1957, which established the legal foundation of the European Union. However, the importance of energy security has increased since the energy shocks of the 1970s.

The European Union is a major energy consumer in the global market. Its domestic production of fossil fuels is not sufficient to meets its total demand. Due to this inadequacy, the Union is highly dependent on external energy resources, namely oil and gas that make the Union the largest importer in the world. According to the current projections, import dependency of Europe on oil and natural gas could increase through 2020, 2030 and 2050. Its increasing demand growth on external energy supplies with its new enlargement has caused a concern about energy supply security to the European Union.

The aim of this study is to examine the European Union energy supply security within its security and defence policy. The first chapter briefly explains the Europan Union Security and Defence Policy. The latter, which is the main part of the thesis, examines energy security policy of the Union within its security and defence policy by three aspects: political, economic and environmental.

In the first section, Russia, the Persian Gulf region, North Africa as a main producers, and the Caspian Basin as a transit region are studied. To enhance security of energy supplies, in this security perspective, a strong and cohensive energy dialogue between the Union and its producing and transit countries is required. In this framework, the Euroepan Union has attempted to improve its energy cooperation with these countries/regions by signing legal and technical agreements; establishing free trede areas in these regions; determining common projects; upgrading existing infrastructures; establishing new oil and gas pipelines and electricity networks; and creating some international programs. The second part of this chapter examines economic dimension of energy security. Creating an internal energy market in electricity and gas sectors are highlighted to secure energy sources thanks to its principles of competitiveness, openness and efficieny, which all need liberalization of electricity and gas markets, diversification of gas pipelines and electricity networks and an effective crisis management. In the final section, relationship between energy security and environment is discussed. Here, the obligations of the Union under the mechanism of the Kyoto Protocol are explained by emphasizing on reducing greenhouse gas emissions in accordance with these obligations, and improving production of renewable energy sources and energy efficiency and saving.

# CHAPTER I

# EUROPEAN UNION SECURITY AND DEFENCE POLICY

Security and defence policy of the European Union (EU) is an ongoing project like its enlargement. This policy has aimed to strengthen the external ability of the Union to act through the development of civilian and military capabilities to conflict prevention and crisis management in the international arena.[1] In this sense, this chapter examines respectively, the evolution of European Security and Defence Policy (ESDP); the impact of September 11, 2001 on the ESDP, including transatlantic relations; the security strategy of the EU; civilian and military operations of the ESDP; and the new Constitution, if it will enter into force, how the ESDP benefits from its provisions.

## 1.1. The Emergence of the ESDP

A European defence framework was firstly launched in the post World War II era when France and Britain signed the Dunkirk Treaty of 1947, aimed to prevent reemergence of Germany as a military power.[2] After the inclusion of Belgium, the Netherlands and Luxemburg into this framework, the Brussels Treaty was signed in March 1948, which constituted the Western European Union (WEU) as a regional defence organization in Europe.[3] However, due to

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[1] European Commission, "EU Security Policy & the Role of the European Commission". http://europa.eu.int/comm/external_relations/esdp/chrono.htm. (22.03.2005)
[2] Sinem A. Açıkmeşe, "The Underlying Dynamics of the European Security and Defence Policy", *PERCEPTIONS,* Journal of International Affairs, Vol. 9, No. 1, March-May 2004, p. 121.
[3] Antonio Missiroli 1, "Flexibility and Enhanced Cooperation in European Security Matters: Assets or Liabilities", *Occasional Paper 6,* January 1999, p.1.

the military weakness of the WEU, a strong defence framework was not able to be created for establishing a fully unified military structures to Europe.[4] Therefore, in 1950 the Pleven Plan was proposed to such purpose by establishing an integrated European army under joint command. The Plan led to the signiture of the Treaty of Paris of 1952 which created the idea of a common defence policy by setting up the European Defence Community (EDC).[5] The EDC was political project that created the European Political Community (EPC). The aim of the EPC was to have wider powers, absorbing the European Coal and Steel Community (ECSC) and the EDC. However, this project never provided this intention because of being refused by the French National Assembly in 1954.[6] As a result of this failure, the integration of European in the defence field lost blood for a long time.[7] And thereby, only the United State (US) through the North Atlantic Treaty Organization (NATO) had guaranteed the collective security of Europe until the end of the Cold War era.

Under this umbrella the unification policy of the European Community (EC) in the economic area grew from single market to monetary union. When the Soviet Empire collapsed, Europe remained alone and had to be responsible for protecting its own security and defence, and thus a security context of the EC was created. Since then, two key milestones have led to significant

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[4] Açıkmeşe, *Op.cit.*, p. 121.
[5] *Ibid*.
[6] The Common Foreign and Security Policy: Introduction, http://europa.eu.int/scadplus/leg/en/lvb/r00001.htm (22.03.2005).
[7] Antonio Missiroli 3, "ESDP – How it works", (in) EU Security and Defence Policy: The first five years (1999-2004), (ed.) by Nicole Gnesotto, EU Institute for Security Studies, Paris, 2004, p.55.

development of the Common Foreign and Seurity Policy (CFSP) of European: the European Union Treaty that is known Maastricth Treaty and the Amsterdam Treaty.

The Treaty of European Union (TEU) was signed in 1992. It was the first to contain provisions for establishing the CFSP with introduction of Title V of the TEU.[8] Article 11 of Title V declares its main principles are as follows: to safeguard the common values and basis interests of the EU; to strengthen security of the Union and interantional society; to improve international cooperation; and to promote democracy and the rule of law, covering human rights.[9] Thus, the legal basis of common foreign and security policy of the Union was established. Moreover, the Treaty expresses that the WEU is part of the European Union being responsible for implementing decisions and actions of EU defence policy. After this explaination, the WEU countries' foreign and defence ministers issued Petersberg Decleration in 1992, which includes humanitarian and rescue tasks, peacekeeping tasks, and tasks of combat forces in crisis management, which is known 'Petersberg Tasks'.[10] Since then, these tasks have promoted military and civilian capabilities of the Union, and constituted the essence of European security and defence policy.[11]

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[8] Jean-Yves Haine, "An Historical Perspective", *EU Security and Defence Policy: The First Five Years (1999-2004)*, edited by Nicole Gnesotto, (Paris: Institute for Security Studies, 2005), p.35.
[9] The Common Foreign and Security Policy: Introduction, http://europa.eu.int/scadplus/leg/en/lvb/r00001.htm (22.03.2005).
[10] Missiroli 1, *Op.cit.,* p.1.
[11] Özlem Terzi, Evolving European Security Capabilities and EU-Turkish Relations, PERCEPTIONS, Journal of International Affairs, Vol. 9, No. 1, March-May 2004, p. 100; Missiroli 3, *Op.cit*., p.61.

The Amsterdam Treaty of 1997, entered into force in May 1999, revised the provisions of the CFSP that mentioned by the Treaty of the EU. Its contribution towards a progressive formation of a common defence policy is stated in Article 17: the CFSP of the EU "shall include all questions relating to the security of the Union", including Petersberg tasks, and thereby a link between the WEU and the CFSP was created.[12] In addtion to this, the Treaty aims at strenghtening the CFSP by the following ways: introducing a common strategy to establish a long-term perspective on CFSP policy; using qualified majority voting to implement CFSP decisions; and establishing the High Representative of the CFSP (HR-CFSP) by replacing the Secretary-General of the Council Secretariat, and thus the Policy Planing and Early Warning Unit was established to help the HR-CFSP for functioning properly. As a result of the strengthening of decision-making procedures and instruments, the European Council has been more efficient to improve a common defence policy.[13]

A European security and defence policy was launched with the Kosovo war of 1999, which is known the EU's failure. The war opened the way to the ESDP to be developed rapidly. As a result of this crisis, the EU has undertaken some measures with the following councils. In this sense, the Cologne Council of June 1999 was an important step towards establishing military capabilites of the Union and placing the Petersberg tasks at the core

[12] ArzuYorkan, "European Union Security and Defense Policy after September 11", *TEXT,* Journal of International Studies, Vol. 3, No. 2, Winter 2004, p.14.
[13]Jorge Juan Fernandaz Garcia, Jess E. Clayton, Christopher Hobley, *European Integration*, (Cambridge: Polity Pres, 2004), p. 233.

of the European common security and defence policy, aimed at creating the capacity for autonomous action and the readiness in order to respond international crises.[14] Hence, this will enable the Union to promote its ability to help international peace and security. After the Cologne Council, the military and civilian components of the ESDP were established. The first was demonstrated by the Helsinki Council of December 1999 which created 'Headline Goal' that set up a multi-national Rapid Reaction Force (RRF) of 50,000-60,000 persons to deploy within 60 days and sustain for at least one year by the member states, aimed at carrying out the full actions the Petersberg tasks.[15] Secondly, the civilian component was developed at the Feira Council of 2000 and the Gothenburg Council of 2001. In these councils, the EU intended the following four elements to be crated before 2003: police cooperation; civilian administration; civil protection; and promotion of the rule of law.[16] To deal with such tasks, some political and military bodies were established in Brussels in March 2000: the Political and Security Committee (PSC), the EU Military Committee (EUMC) and the EU Military Staff (EUMS). As a result of the establishment of these bodies, the ESDP has for the first time been institutionalized.[17]

[14] Missiroli 2, Antonio, "Background of ESDP (1954-1999)", Institute for Security Studies, date, p.2.
[15] Europa, "The Common Foreign Security and Defence Policy: Introduction". http://europa.eu.int/scadplus/leg/en/lvb/r00001.htm. (22.03.2005).
[16] *Ibid*.
[17] Terry Terriff et al, "European Security and Defence Policy After Nice", *The Royal Institute of Internaional Affairs (RIIA) Briefing Paper*, No.20, April 2001, pp. 2-3.

## 1.2. September 11

In the post Cold War era, the world has faced new challenges such as terrorism, islamic fundamentalism, the threat of weapons of mass destruction, etc. One of them is the events of September 11, 2001 (the terrorist attacks on Pentagon and WTC). In this section, this question: how has the ESDP been affected by September 11?, will be responded. After these terrible attacks, to combat terrorism, the EU has taken some quick measures and important actions, which have been at three levels: the domestic level such as political leadership; the EU level such as establishing institutions and military and civilian capabilities; and the transatlantic level such as relations with NATO, the US, and the other fields – Russia and the Mediterranean.[18]

In the aftermath of September 11, the first EU response to such challenges was the Plan of Action, adopted by a European Council meeting on 21 September. The Plan covered "diplomatic efforts, police and judicial cooperation, humanitarian aid, economic and financial measures, air transport security, and emergency preparedness", and stated that actions of the EU against such threats should be increased by making the ESDP operational.[19] The second is a Draft Declaration on the contribution of the CFSP/ESDP issued by the European Council. The Decleration declared that

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[18] Yorkan, *Op.cit*., pp. 15-16.

[19] Franco Algieri, "EU foreign and security policy post September 11$^{th}$ 2001: Some lessons for the reform debate and for transatlantic relations", Center for Applied Policy Research (C.A.P), Ludwig-Maximilians-University Munich, February 2002, available at: http://www.cap.uni-muenchen.de/transatlantic/download/2002_algieri.doc

the global approach is essential to overcome the new challenges like terrorism. In this regard, it explained the functions of the EU as follows: promoting its instruments in the field of conflict prevention; focusing on diplomatic efforts with third countries for overcoming such threats, non-proliferation and arms control; providing assistance to these countries to improve their capacities to respond international threat of terrorism in an effective way.[20] The third and foremost effort was Laeken Summit of December 2001.[21] The Summit stressed that the development of the ESDP including military and civilian capabilities and the creation of the appropriate EU structures within the ESDP should be continued. It also mentioned a progress that covered balancing the development of military and civilian capabilities and concluding the security arrangements with NATO in relation to using its assests and capabilities, and thereby the EU would have capacity to conduct some crisis management actions.[22] Simultaneously, the EU has underscored contribution of disarmament, arms control and non proliferation to fight against terrorism. In this sense, the General Affairs Council adopted 'targeted initiative' for overcoming such dangers in a determined way.[23] In sum, it can be seen that in a few months after the September 11, the Union took some important measures on the war against terrorism which included not only military means but also civilian ones.

[20] Yorkan, *Op.cit.*, p. 16
[21] European Commission, "EU Security Policy & the Role of the European Commission". http://europa.eu.int/comm/external_relations/esdp/chrono.htm. (19.03.2005)
[22]Fernandaz Garcia, Clayton, Hobley, O*p.cit.*, p.237.
[23] The Council of EU, "The Common Foreign Security and Defence Policy". http://ue.eu.int/pressData/en/misc/71115.pdf. (18.03.2005).

### 1.2.1. Transatlantic Relations

In the aftermath of September 11, the Article 5 of NATO (an attack on one NATO member means that the attack is on all NATO members) was reminded, and thus cooperation at the transatlantic level has been entailed for collective security and defence of the Atlantic members.[24] In this regard, the Prague Summit of November 2002 was important. The Summit highlighted that the EU, the US, and NATO needed closer cooperation to overcome such new threats, aimed at making Euro-Atlantic area more stable and secure. And it declerad that NATO has still guaranteed the peace of its members and promoted stability and security of them, and thereby the Atlantic organization would be restructured.[25] This has been enjoyed by the EU-NATO members to improve their military and civilian capabilities, and thus the ESDP could technologically be more developed.[26] However, on the other hand, the EU-US relations have become more strained in the post September 11 because of US unilateralist approach on the war on terrorism.[27] While the US refers to military means, the EU stresses political means of security and then use of force is only as a last resort. In this respect, the Union adopted a Resolution on foreign and security policy before the Iraqi war, which declared that the EU and its national governments

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[24] M. Daniel Vernet, "The European Security and Defence Policy: Is Peacekeeping Enough?", Paris , 14.12.2001, available at: http://www.cicerofoundation.org/lectures/vernet_dec01.html
[25] NATO, "Prague Summit Declaration", issued by the Heads of State and Government, Prague, 21 November 2002.
[26] *Ibid*.
[27] Robin Hart, "Wilton Park British-German Forum 2002: How has the world changed since 11 September?", Brief report from Wilton Park Conference: (WPS02/2 of 24-28 June 2002), Augost 2002.

should use their influence against a military response in Iraq.[28] However, the resolution could not be sufficient, and the Union members like Britain, Spain, and Italy has supported the US-led military operation in Iraq. This situation has showed that the EU has not a common security and defence policy due to such differences among its member states.

The other problem between the US and the EU is in relation to security burden sharing. The US has been putting pressure on Europe to increase its defence expenditure and stressing that there are differences between capabilities of both, 'the capabilities gap'.[29] The defence spending of the US would be more than the European one, and its priorities would be different from the Union because of the fact that the US is a global power and threats against it would be bigger than the Union's ones. However, in international arena, security burden sharing of the Union should not be seemed too little, i.e, the EU-15 undertook the military burden of pecakeeping operations in the Balkans.[30] The Union has also been responsible for providing for civilian aid in the Middle East, especially for the reconstruction of Afghanistan after the war of 2002 on terrorism by the US against it. With related to civilian aid, it is worth saying that there is more consensus between the member countries on non-military crisis managements rather than military crisis managements, which causes the EU to need assets and capabilities of the NATO during a military crisis management.

[28] European Greens, "EFGP 3rd Congress: Foreign and Security Policy", Berlin, 17-19 May 2002.
[29] Fraser Cameron, *The Future of Europe*, (London: Routledge Press, 2004), pp. 121-123.
[30] *Ibid.*

In the post September 11, cooperation with Russia and the Mediterranean Sea region has been promoted. A Presidency Report[31] said that 'the cooperation and partnership with Russia would continue for the future. In the aftermath of the terrible attacks, Russsia has shared the stage with both the US and the EU in the following fields: the war on terrorism, the campaign against weapons of mass destruction and regional peacekeeping tasks.[32] During the EU-led crisis management operations, the country is responsible for being informed of the EU's intentions in relation to military options.[33] As to the Mediterranean Sea region, the dialogue with this area has been continued in the field of security, and human rights and economy as well since the Barcelona process of 1995. And also at the Prague Summit, a cooperation with the Mediterranean Sea region was seen as an essential part of transatlantic relations.[34] Consequently, in the new security dimension, global challenges are able to be solved via such mutilateral cooperations that could make Europe more stable and more peaceful place.

### 1.3. European Security Strategy

In June 2003, Javier Solana, the High Representative of the CFSP, Javier Solana issued a European Security Strategy paper which explained the security strategy of Europe.[35] The paper explains the new challenges as

[31] "Annex VI-V-VI: Presidency Report on European Security and Defence Policy", Brussels, June 2002.
[32] Howorth, *Op.cit*., pp. 1-4.
[33] Presidency Report of 2002, *Op.cit.*.
[34] Prague Summit Declaration, *Op.cit*
[35] Havier Solana, "A Secure Europe in A Better World", *European Security Strategy Paper*, Brussels, (12 December 2003).

terrorism, proliferation of weapons of mass destruction, regional conflicts, state failure, organised crime, and new diseases, i.e. AIDS and SARS. Such challenges have constituted main threats to security of Europeans, and thus EU's responsibility has been increased more than ever. In this framework, Solana underlined the strategic objectives of the EU as follows: addressing threats; creating a security framework in its neighbours; promoting effective mutilateral cooperations and partnerships; and having more capable, active and coherent policy implications. In short, the Paper states that the EU faces real challenges, but it also has big opportunities such as creating multilateral relations with third countries.

### 1.4. The Operations of the ESDP

Since January 2003, the EU has started its first peace-keeping operations in accordance with the Petersberg tasks. The ESDP has been engaged in three areas: the first-ever civilian crisis management operation was in Bosnia-Herzegovina in January 2003, undertaken by EU's police mission; the second was the first ever military operation of the ESDP in the former Yugoslav Republic of Macedonia in March 2003; and the last was in Democratic Republic of Congo in June 2003, which was the EU's first military operation outside Europe. These operations were relied on assets and capabilities of NATO except the last operation.[36] To sum up, these civilian and military operations have played a significant role to measure the ability

[36] European Commission, "EU Security Policy & the Role of the European Commission". http://europa.eu.int/comm/external_relations/esdp/chrono.htm. (19.03.2005).

of the EU to implement some of its security policy instruments, which were decided by the Helsinki and the Feria Councils.

### 1.5. The New Constitution

A new EU Constitutional Treaty was signed by the EU Heads of State or Government of the 25 Member States and the 3 candidate countries on 29 October 2004, in Rome. The treaty suggests that the Petersberg tasks should be furthered moving beyond; and agencies for European armament, European research, and European military capabilities should be established. And it proposes an EU foreign minister to facilitate coherence and coordination between EU institutions and bureaucracies, which will also be interested by the CFSP/ESDP. In addition, the Treaty supports some members' closer cooperation in the fields of the ESDP, and thanks to such cooperation, solidarity among members against global threats such as terrorism would be increased.[37] However, the Treaty has so far not entered into force because its referendum process is going on. The ESDP would enjoy the mentioned elements if the Treaty will be ratified.

With related to enlargement, the ten 10 new members joined on the EU on 1 May 2004, which increased the Union members' number from 15 to 25. This situation has affected the decision-making process of the ESDP because of the fact that providing unanimity and solidarity for taking any decision that interests all members is difficult in the enlarged EU. Moreover, the Union borders has been expanded via its enlargement, this situation has entailed

[37] Cameron, *Op.cit*., pp. 28,118.

the Union for promoting security and stability within its new members and their neighbours. That is why the EU has strengthened dialogue with Russia and the Mediterrinean Sea region, the Balkans and Turkey as a candidate state.

As for current terrorist attacks within the Union, the first in Madrid on 11 March 2004 and the other in London on 21 July 2005, hundreds of people were killed and injured by bombs. Although the Union has undertaken some important measures on the fight against terrorism, especially after the September 11, it has not been able to prevent these attacks. For this reason, the Union should improve its security and defence instruments, and thus the ESDP would be more efficient and stronger.

### 1.6. Conclusion

The idea of creating a European security autonomy began in 1950s. However, its common security and defence policy was created with the Treaty of European Union of 1992 to protect itself against the emergence of Russia. In 1999, the Amsterdam Treaty of the Union underlined once again the CFSP provisions. In the meanwhile, the Kosovo crisis was emerged as a failure of the Union, which has opened a rapid way for developing the ESDP. Since then, the Union has increased its military and civilian means via the Helsinki, the Feira and the Guthenburg Councils.

In the aftermath of September 11, the EU has taken quick measures on the war against terrorism by adopting some declarations and holding some meetings which underlined civilian means, including transatlantic cooperations, rather than military ones. The Union also created its security strategy paper which adressed the threats such as terrorism, weapons of mass destruction, state failure, etc.; and on the other hand, it described the strategies of the Union to overcome such challenges. However, the last terrorist attacks against the members of the Union (Spain and England) have showed that the ESDP needs to be promoted.

# CHAPTER 2

# ENERGY SECURITY IN ESDP

The European Union is a major energy consumer in the world. Its current energy consumption consists of oil (41%), gas (22%), solid fuel (19%), nuclear (15%) and renewable energy sources (6%).[38] By 2020, its demand will become as follows: oil (38%), gas (29%), solid fuel (19%), nuclear (6%) and renewables (8%).[39] Domestic production of fossil fuels in the Community is not sufficient to meet its total demand.[40] For this reason, the EU is highly dependent on external energy supplies: 50% of its current energy demand – oil (about 70%) and gas (40%) – imported from outside.[41] This situation makes it the largest oil and gas importer in the global market.[42] The current projections show that EU import dependency could increase to 90% for oil and 70% for gas by 2020.[43]

The growing import dependency of the EU on gas and oil with its new enlargement and competition on these main energy sources in the global

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[38] Debra Johnson, "EU-Russian Energy Links: A Partnership Made in Heaven or Hell?", Draft prepared for *Conference on Resource Politics and Security in a Global Age*, Sheffield University (26-28 June 2003), p. 4

[39] *Ibid*.

[40] Gas reserves located in the UK, Denmark and the Netherlands are not adequate. And oil reserves in the North Sea will run out about 2030-2050. (European Commission (EC), "The Internal Energy Market – Improving the security of energy supplies", MEMO, 2002).

[41] EUROPA, "Internal Energy Market: Commission Proposes Strengthening Security of Oil and Gas Supplies", Brussesls, (11 September 2002). Available at : http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/02/1288&format=HTML&aged=1&language=EN&guiLanguage=fr

[42] Panagiota Manoli, "The European Neighbourhood Policy – Energy and Transport Cooperation Around the Black Sea", Conference organized by EKEM, Athens, (20-21 April 2005).

[43] CEC, Commission Communication to the European Parliament and the Council, "The Internal Market in Energy: Coordinated Measures on the Security of Energy Supply", *COM(2002) 488 final*, Brussels, 2002. p.5.

market have caused a concern about energy supply security to the EU, and the world as well. The seeds of this concern has been created since the 1970s energy crises.[44] Before explaining Union's measures on its energy security policy we should know what energy security means. The term energy security[45] is defined as guaranteeing the physical availability of energy products at objective and reasonable and/or affordable prices over the short and long terms.[46] This definition shows us that ensuring energy security does not mean that it requires only military measures. On the contrary, there are numerous non-military measures to enhance security of energy supplies. In this framework, EU energy supply security is examined by three different perspectives: political, economic and environmental.

### 2.1. Energy Supply Security and Politics

In the political perspective, strengthening energy dialogue between consumers and producers is required to secure energy supplies. The Green Paper of 2004 on 'study on energy supply security and geopolitics' underlines the importance of energy dialogue as a main tool for such aim. The Commission states that "greater stability of supplies, safety standards for external supplies, the price mechanism, and negotiation framework for long-term (gas) contracts" are guaranteed thanks to a strong energy cooperation

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[44] The first oil shock in 1973-4 resulted from political decision of the OPEC countries because of the Western support for Israel in Israeli-Arab conflict; and the second, in 1979, was due to the Iranian Islamic revolution. Both shocks had a negative impact on economic growth and financial losses in all OECD countries.

[45] The terms of energy security and energy supply security are the same meaning.

[46] "Security of Natural Gas Supply in the European Part of the Unece Area", Report, http://www.gascentre.unece.org/minisitepub/rsng/2bis.htm (17.07.2005).

with producing countries.[47] As a result, the EU has attempted to establish or/and promote its energy dialogue with producing and transit countries by signing legal and technical agreements; establishing free trede areas in these regions, where the way is opened for them to access the international trade areas such as the World Trade Organization (WTO); determining prior projects for both sides; upgrading existing infrastructures and establishing new oil and gas pipelines and electricity networks that diversify supplies' routes; and so on. In this framework, Russia, the Persian Gulf region and North Africa as producers, and the Caspian basin as a transit region are studied. In addition, some international programs of the EU are mentioned due to promoting energy cooperations between these regions and the EU.

### 2.1.1. Russia

Russian Federation is a principal energy supplier of the EU. 50% of gas, 25% of oil and about 35% of uranium of total imports of the new enlarged EU are met by Russia.[48] The Union would also be future importer of Russia for oil by 25% in 2010[49] and for gas by 60% in 2030.[50] Likewise, Russia needs European energy market to export its oil and gas. It is dependent on 53% of oil and 36% of gas within its total exorpts to energy market of the

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[47] European Commission (EC), "The Internal Energy Market – Improving the security of energy supplies", *MEMO*, 2002. Available at: http://europa.eu.int/comm/energy/home/internal_market/oil_gaz/doc/memo2002_en.pdf

[48] Communication from the Commission to the Council and European Parliament, "The Energy Dialogue between the European Union and the Russian Federation between 2000 and 2004", *COM(2004) 777 final*, Brussels, 13.12.2004, p. 6.

[49] Charles Grant and Katinka Barysch, "The EU-Russia Energy Dialogue", *Briefing Note*, *Center for European Reform*, May 2003, p. 3.

[50] Loyola de Palacio, "Speech on EU energy supply security and geopolitics", available at: http://www.clingendael.nl/ciep/events/20040929/29092004_CIEPEPC_Proceedings%20Panel%20discussion.pdf, (10.09.2005).

EU.[51] In addition, energy sector of the country requires upgrading infrastructures, and investments for production and transportation of its energy supplies. As a result of their mutual concerns, the EU and Russian Federation need a strategic energy partnership.

The collapse of the Soviet influence in Eastern Europe created a good opportunity to establish energy cooperations with Russian Federation and the other Former Soviet Union (FSU) countries as well. This process began with Lubbers Initiative of 1990, which stated that energy cooperation could help encourage economic recovery in these regions and guarantee energy supply security of the European Community (EC). This idea was welcomed by the European Council in 1990, and then the European Energy Charter[52] was signed in 1991. The Charter aimed at enhancing security of energy supplies; improving energy efficiency in production and transportation; and reducing environmental problems. To reach such purposes, the Community saw the FSU as priority to transfer its knowledge and investments to the region.[53] After three years of the negotiations, 51 countries[54] signed the Energy

[51] Jeff Piper, "The EU-Russia Energy Dialogue: Towards an EU-Russia Energy Partnership", *Presentation,* Moscow, 29-30 November 2004. Available at: http://www.iea.org/textbase/work/2003/soyuzgaz/proceedings/Piper_slides.pdf

[52] The signatories include the states of Western, Central and Eastern Europe, plus the USA, Canada, Japan and Australia; and it was a political declaration and the first step towards the Energy Charter Treaty.

[53] Meliha Benli Altunışık, "Avrupa Birliği'nde Petrol ve Doğal Gaz Piyasalarına Yönelik Politikalar ve Türkiye Uygulamaları", (in) *AB'nin Enerji Politikası ve Türkiye, (Energy Policy of the EU and Turkey),* (Eds Yavuz Ege, Gamze Öz, Tuğrul Arat, Sanem Baykal, Aylin Ege, Meliha Benli Altınışık and Hakan Ercan), (Ankara: UPAV Press), May 2004, p.155.

[54] The countries consist of all the Union member states, Russia and the other CIS countries, Mongolia, Australia, Japan and the European Community.

Charter Treaty (ECT) in December 1994, which entered into force in April 1998.

The ECT was an earlier attempt to improve a European-Russian energy partnership. The Treaty established a legal framework in order to promote long-term energy cooperations based on the principles of openness, transparency and non-discrimination for all of its participants in energy sectors. Its provisions focus on protection of foreign energy investments; trade in energy materials, products and energy related equipment, based on the WTO rules; freedom and facilitation of energy transit through pipelines and grids; improvement of energy efficiency; and international dispute settlement. As a result, foreign investments in the energy sectors of Russia and the other FSU countries could be supported in the legal framework of the Treaty and transportation of natural gas and oil from these producers to European energy market could be enhanced. However, Russia has so far not ratified the ECT,[55] except applying it provisionally.

The bilateral EU-Russia energy dialogue was launched at the EU-Russia Summit of October 2000 in Paris. Both parties have decided to establish a strategic energy partnership, with given significance on energy security. Since then, many summits[56] have been holded, and some progress reports

[55] The main reason of Russia's non-ratification of the ECT is the strong oppisition of Gazprom. (Ria Kemper, "The Role of the Energy Charter Secretariat", Presentation, See: http://www.geopolitis.net/geopol/geo/article/Geoenergie/arti10697824924428C8F698D88FCE98.html (17.08.2005); and Benli Altunışık, *Op.cit*. p. 156.)
[56] These summits are respectively as follows: In May 2001in Moscow; In October 2001 in Brussels; In 29 May 2002 in Moscow; In November 2002 in Brussels and Moscow; In May 2003 in St.

and joint statements were adopted at these summits. They have focused on the following criteria: securing long-term energy supplies in a legal framework; ensuring the physical security of transport networks; promoting a favourable investment climate in Russia; evoluating pilot energy saving projects; developing cooperations on nuclear and maritime safeties; increasing the environmental standarts (the Kyoto Protocol); ratifying the ECT; and concluding the Transport Protocol negotiations.

The results of the EU-Russia energy dialogue can be arranged as follows:

- The establishment of the EU-Russia Energy Technology Center of 2002[57] was the first concrete action of this dialogue. The Center develops industrial cooperation between both parties in the field of advanced energy technologies; and encourages the investment for projects, which are idendified as being of common interest of both sides.
- Diversification of pipelines is one of the most priorities of the EU. In this regard, the following gas and oil pipelines projects were launched: the Northern Trans-European gas pipeline;[58] the Yamal-Europe

Petersburg; In November 2003 in Rome; In 25 November 2004 in the Hague; and In May 2005 in Moscow.

[57] For more imformation, look at: http://www.technologycentre.org/

[58] Its long is approximately 1,300 kilometres (CEC, COM(2003) 742 final,). It would transport Russian gas to Europe – from the Russian coast north of St. Petersburg under the Baltic Sea into northern Germany, the Netherlands and the United Kingdom. It was considered within the status of TENs. This pipeline project would be finished by 2010.(http://www.eia.doe.gov/emeu/cabs/russia_pipelines.html (24.08.2005).

gas pipeline;[59] and the integration of the Druzhba oil transmission system.[60] All these projects are labelled 'common interest' to both parties.

- Setting up electricity and gas markets (Europeanization of the markets) between the EU and Russia has been aimed by this energy dialogue.[61] The interconnection of electricity grids between the EU and Russsia was recognised as common interest project at the EU-Russia Summit of October 2001. A feasibility study of the synchronous interconnection of the systems of the Union for the Co-ordination of Transmission of Electricity (UCTE)[62] and of the Integrated Power System/United Power System (IPS/UPS) is being carried out, and will be completed at the latest in 2006.[63] Integration of electricity markets of both parties would help improve their electricity supply security and create an opportunity for cooperation in the electricity sectors of them.[64] For the latter, the integration Russia's gas market to Europe is increasingly required.[65] However, the country faces some difficulties for such integration: the first is that its gas market including its export

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[59] This pipeline is the expansion of the Yamal I gas pipeline from Russia to Germany via Balerus and Poland.
[60] This oil system would ensure Russian oil exports to the international market from Croatian to Central European countries en route via Belarus, the Ukraine and the Adria network. (The Synthesis Report, "EU-Russia Energy Dialogue", adopted at the EU-Russia Summit of September 2001)
[61] Andris Piebalgs, "Four years of energy dialogue with Russia have yielded positive results", *Press Releases, IP/04/1467*, EUROPA, Brussels, 2004. Available at: http://www.europa.eu.int/rapid/pressReleasesAction.do?reference=IP/04/1467&format=HTML&aged=0&language=EN&guiLanguage=en.
[62] For more imformation, look at: http://www.ucte.org
[63] The Fifth Progress Report, "EU-Russia Energy Dialogue", adopted at the EU-Russia Summit of November 2004.
[64] Commission of the European Communities (CEC), "Energy Dialogue with Russia – Update on Progress", *Commission Staff Working Paper* , *SEC(2004) 114*, Brussels, 25.01.2004, p.8
[65] "Final Report on Green Paper – Study on Energy Supply Security and Geopolitics ", Clingendeal International Energy Programme (CIEP), The Hague, January 2004, p.60.

pipelines is under the monopolies of Gazprom – the gas company of Russia; and the other is that its energy sector needs modernization of its techonology and new infrastructure for more gas exports to European market and others.[66]

- To establish a fovourable investment climate in Russia's energy sector, Russia's accession to the WTO is crucial.[67] This accession would be an important step towards integration of Russia's economy to the international trade system: the application of the norms and disciplines of such an international institution would make their energy markets as well as thir economies closer.[68] In addition, long-term agreements including the Production Sharing Agreements (PSAs)[69] are essential for creating such an investment climate.[70] To serve such aims, any participation of EU companies in Russia's producer companies stakes can improve the security of long-term supply contracts.[71]

- Russia's implementation of the Kyoto Protocol on climate change[72] would benefit it by stimulating the modernisation of its energy sector and increasing European investment in its energy market if it is

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66 Noriko Fujiwara, "The EU-Russia Energy Dialogue: Where is it leading to?", *Oil, Gas & Energy Law Intelligence*,Vol. I – No. 5, December 2003, p.2. Available at: http://www.ceps.be/files/NF_OGEL_EnergyDialogue.pdf

67 COM(2004) 777 final, p. 13.

68 Grant and Barysch, *Op.cit.*, p. 1.

69 PSAs are mainly used in market economies to ensure the legal and tax environment to protect investments in natural resources.

70 Commission of the European Communities (CEC), Communication from the Commission to the Council and the European Parliament, "Final report on the Green Paper – Towards a European strategy for the security of energy supply", *COM(2002) 321 final*, Brussels, 2002, p. 20.

71 Andrei Belyi, "The enlargement impact on the EU-Russia relations in energy field", *UNECE*, 2003, pp. 14-15.

72 See "Environment Section" for commitments of the Protocol on reducing CO2 and other measures.

ratified by Russia.[73] The Protocol aims at improving energy efficiency. For this objective, three pilot projects in Arkhangelsk, Astrakhan and Kaliningrad regions[74] of Russia have proposed (i.e.only in Kaliningrad region energy savings could reach 35-40%[75]).

- To reinforce the safety of energy transport networks, the complementary use of the satellite navigation systems of Russia's GLONASS and the future Europe's GALILEO have been pursued as an objective since 1999. The two systems would secure high levels of safety for the transportation of hydrocarbons.[76] The negotiations on this matter are being continued by both groups.

- To ensure nuclear and maritime safeties: a Cooperation Agreement was signed between the Russian Federation and EURATOM in October 2001, which could serve as an important element for the collaboration in the nuclear energy sector; and for the latter, both parties recognise the importance of implementation of the International Maritime Organisation (IMO) standards.[77]

Despite these developments, there are some barriers that have made the dialogue progress slow such as the non-ratifications of the ECT and the

[73] Joint Statement adopted at the EU-Russia Summit, Brussels, October 2001; and "Recent Press Releases and Speeches on First Summit between The Enlarged EU and Russia", 19 May 2004, available at: http://www.delrus.cec.eu.int/en/news_576.htm

[74] These pilot projects have been stated by the second, third and fifth progress reports, adopted at the subsequent EU-Russia summits. The Commission declared that they would shortly be financed under technical assistance of TACIS programme. (SEC(2004) 114 ).

[75] The Fifth Progress Report, "EU-Russia Energy Dialogue", adopted at the EU-Russia Summit of November 2004.

[76] The Fourth Progress Report, "EU-Russia Energy Dialogue", adopted at the EU-Russia Summit of November 2003.

[77] The Fifth Progress Report, 2004.

Kyoto Protocol by Russia, ongoing negotiations for signing the Transit Protocol[78] by her and her non-accession to the WTO. However, unlike these issues, the energy partnership between the EU and Russia would increasingly continue because of their huge interdependecy, and also this dialogue has been generally seen as a good model for promoting energy dialogues with the following regions.

### 2.1.2. The Persian Gulf Region

More than 60% of world's proven oil reserves are located in the Persian Gulf region, and production costs of the oil are the lowest.[79] Although the region has rich oil reserves and the lowest production costs, it is not secure and stable place. The invasion of Iraq by the US after September 11, 2001; and the US confrontation with Iran on nuclear issue; the ongoing Israel-Palestinian conflict despite some recent developments; the attacks of terrorist groups on oil and gas facilities, i.e. Al-Qaeda; etc. are main risks which challenge security and stability of the Gulf region, including security of energy supplies of the EU, other importers as well. For being a stable and secure place, the region reguires more international involvements than internal ones. In this sense, the EU is more preferable than the US thanks to

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[78] The Transit Protocol was signed in 2002 under the ECT mechanism. The objective the Protocol is that energy flows passing towards the ECT's participants territories in transit would not be interrupted; that tariffs charged on energy transit would be reasonable and non-discriminatory; and that a legal climate for investments in transit of energy through the CIS region would be established.

[79] CIEP, Final Report on Green Paper, *Op.cit.*, 2004, p. 186; and "EUROGULF: An EU-GCC Dialogue for Energy Stability and Sustainability", *Final Research Report*, presented at the Concluding Conference, Kuwait, 2-3 April 2005, p.28 of 101.

EU's soft security measures[80] such as promoting economic development, democratization, rule of law, respect to human rights, and so on.

Ensuring the flow of energy supplies from the Gulf is an important pre-requisite for the EU because of the fact that the Gulf region has been traditional supplier to Europe, namely only during 2003, 30% of the Western European countries' oil imports (corresponded to 17% of their total demand) came from the region – Saudi Arabia (52%), Iran (33%), Iraq (7%), and Kuwait (6%).[81] On the other hand, a requirement of diversities in the region economies due to being heavily dominated by oil and reforms in their energy markets are needed. Thus, cooperation with the EU in this field could contribute to transfering EU technologies and investments to the Gulf and ensuring their access to European energy market freely. The energy dialogue with the Persian Gulf region is examined in three parts: the GCC, Iran and Iraq.

### 2.1.2.1. GCC

The Gulf Cooperation Council (GCC) was established in 1981 by the Arab Countries of the Gulf region.[82] The GCC members supplied the EU by nearly 11% for its oil import in 2001.[83] With related to energy dialogue between both parties, the EU has underlined its priorities as follows: developing energy trade relations between the two sides; supporting energy market

[80] Bülent Aras, "Gulf Security: European Knights or American Cowboys?", The Daily Star, 20.12.2004.
[81] "Energy Information Administration", http://www.eia.doe.gov/emeu/cabs/pgulf.html (22.07.2005)
[82] They are: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates
[83] EUROGULF, *Op.cit.*, p. 4 of 20.

reforms of the GCC; developing interconnections of energy and transport; and energy efficiencies and technological developments.[84]

The European Community signed a Cooperation Agreement with the GCC in 1989, which aimed at establsihing a free trade area.[85] After signing of it, negotiations on creating a EU-GCC Free Trade Agreement were launched in 1990, and restarted in 2002. The objective of the Agreement was to establish a Customs Union among the GCC members, which entered into force in January 2003. It has been expected to guarantee to stabilize the energy supplies of the EU.[86] The Free Trade Agreement would be concluded if the Customs Union is effectively implemented.[87] Moreover, many efforts have been taken place for promoting the energy cooperation: conferences on Natural Gas in 1996, on Oil and Gas Technologies in 1997; meetings of the EC-GCC energy working groups in 1999 and 2000 in Dubai; and developing projects such as the EUROGULF, launched in 2002 and financed by SYNERGY program of the Commission. The Energy Commissioner, Andris Piebalgs, stated that the EUROGULF project created a new phase in this dialogue.[88] The aim of the project has been to analyse EU-GCC relations with respect to

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[84] Andris Piebalgs, "Speech for the Inaugural Session of the EU-GCC Energy forum Conference", Kuwait, 2 April 2005. Available at: http://europa.eu.int/comm/commission_barroso/piebalgs/doc/media/2005-04-02-kuwait.pdf

[85] It was entered into force in 1990. The Agreement focuses on the following criteria: strengthening relations between the two parties in an institutional framework; broadening economic and technical cooperation relations; and promoting development and diversity in the GCC countries.

[86] "GCC (Gulf Cooperation Council)", European Institute for Research on Mediterranean and Euro-Arab Cooperation (MEDEA) http://www.medea.be/?page=2&lang=en&doc=32 (03.08.2005); and "EU-LDC Themes - Regional Focus – Policy - the EU and the Gulf Co-operation Council (GCC)", http://www.eu-ldc.org/themes/regionalfocus/regfocus_policy4.php 03.08.2005).

[87] EUROGULF, *Op.cit.*, p. 16 of 73.

[88] Piebalgs, *Op.cit.,* http://europa.eu.int/comm/commission_barroso/piebalgs/doc/media/2005-04-02-kuwait.pdf

oil and gas issues by improving the energy dialogue. The EUROGULF Energy Forum held in Kuwait on 2-3 April 2005 was concluding part of this project, which explained the current energy situation in the Gulf region as a whole and idendifies main risks as well as main important interconnection projects in the energy field for ensuring stability and security of energy supply from the region to Europe.

As to interconnection of networks between the EU and the GCC, the EUROGULF Forum mentions a rapid requirement of a gas pipeline between the GCC through the Near East and from there to Europe. In this regard, the Qatar-Turkey project (across Saudi Arabia, Jordan and Syria, and may be serving Lebanon) has been underlined as a priority[89] because of the fact that Qatar is the third largest gas producer after Russia and Iran and liquefied natural gas (LNG) from Qatar to the European market covers huge quantities among other members of the GCC. Thereby, the EU has highlighted the country as a main supplier of gas, and signed some agreements with Qatar, namely the Gas Natural Group of Spain signed two agreements with Qatargas of Qatari company, in April 2001: the first covers the deliveries of 5.6 million tons of LNG between 2001 and 2009, and the latter covers the deliveries of 3.5 million tons between 2002 and 2007 to Spain.[90] Such developments in LNG diversify energy supplies for the EU and enhance regional market integration that guarantee security of energy supply.

[89] EUROGULF, *Op.cit*., p. 35 of 55.
[90] *Ibid*., p. 43 of 55.

### 2.1.2.2. Iran

The EU and Iran are important trade partners: 40% of EU imports coming from Iran and 36% of Iran's exports going to the EU,[91] which correspond to more $ 13 billion.[92] 8% of EU oil demand is met by Iran, [93] which cover 80% of its total imports from Iran.[94] The economy of the country needs reforms on which has been focused by the new government under Mahmud Ahmadinejad, and thus can create a good opportunity to European investment in there, where the Union can play a significant role by enhancing cooperation between it and the country.

The importance of energy dialogue with Iran has been underlined and it has been seen as a long-term supplier of oil and gas for the EU.[95] With related to this, Loyola de Palacio stated that the EU-25 has willingness to promote energy cooperation with Iran.[96] In this way, some developments have occured. The first was an EU-Iran energy working group, established in 1999. It has held meetings in Tehran and Brussels, occasionally. The objectives of these meetings are to promote energy cooperation between both sides; transfer high technology and invsetment from EU companies related to oil and gas in the country; enhance security of networks and

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[91]Commission of the European Communities (CEC), Communication from the Commission to the European Parliament and the Council, "EU Relations with the Islamic Republic of Iran", *COM(2001) 71 final*, Brussels, 07.02.2001.
[92] "EU-Iran Partnership", *Iran Daily*, 28.12.2004.
[93] "Iran-EU ink two agreements in energy sector", *Payvand's Iran News,* 10.19.2002.
[94] Iran Daily, *Op.cit*., 28.12.2004.
[95] "Main points from EU offer to Iran", http://www.eubusiness.com/Energy/050805163022.20lq6oei (30.09.2005)
[96] "EU interested in boosting energy cooperation with Iran" http://www.gasandoil.com/goc/news/nte42490.htm (30.09.2005)

interconnections; and help to implement the research projects by creating link between Iranian and European experts. According to officials who have managed these meetings, the outcomes generated from these talks would also increase energy dialogue between the EU and Iran in the long term. The other development is that the EU opened an Energy Cooperation Center in Tehran in 2002, which provides a forum for sharing ideas and information on non-nuclear energy technologies and idendifies prior projects of the two sides.[97] The Center also helps the energy working group to achieve its targets, arranged above. Moreover, negotiations on establishment of an Iran-EU Trade Cooperation Agreement have been going on since 2002 by some directives of the Council.

On the other hand, the US sanction on Iran economy and its prevention of the application of Iran to the WTO affect European energy companies to make investments in this country and create a division between the US and the EU, which supports the accession of Iran to the WTO and desires a strong cooperation with Iran on its economy. The last and foremost is the dispute on Iran's nuclear issue, the US identifies Iran as a member of 'axis of evil', although the new president Ahmadinejad has advocated that the aim of using nuclear technology is to peaceful purposes. This confrontation affects security of Iran and specifically security of EU's energy supply. The EU-3

[97] "Iran Report", prepared by *RFE/RL's Newsline Team*, Vol.5, No.39, 28.12.2002. Available at: http://www.globalsecurity.org/wmd/library/news/iran/2002/39-281002.htm

members, France, Germany and the UK, have been negotiating with Iran on this matter to enhance Iran security as well as the Gulf security as a whole.

### 2.1.2.3. Iraq

The inability of the US-led coalition to manage reconstruction of Iraq after the occupation; ongoing political unrest and stagnancy of economy within Iraq; the inadequacy of the country to restore its oil exports to pre-war levels; and the frequent disruptions of oil due to attacks on pipelines and refineries are major risks to security of energy supply of the EU. This situation in Iraq prevents an establishment of a strong energy dialogue between the EU and the country. Despite such conditions in Iraq, however, the Commission has recently declared that an informal EU-Iraq energy dialogue could be established.[98] For reaching such purpose, the successful recovery of Iraq is increasingly needed because foreign investors require political, economic, financial and legal stablities of the country. However, the situation in Iraq is getting worse, there is no any clear evidence when the country becomes a stable place where the EU can create a good energy partnership like other members of the Gulf region.

In sum, identification of Iran as a member of 'axis of evil' by the US and the uncertain situation in Iraq caused by the US invasion as external challenges, and political unrests and economic stagnations in the Gulf as internal ones are the main difficulties to EU energy supply security, and other

[98] CEC, "The European Union and Iraq: A Framework for Engagement", *COM(2004) 417 final*, Brussels, 2004, p.9.

importers including the US, Japan, etc. On the other hand, the closer energy relationship with the Gulf region helps provide a political advantage to the EU that it plays a significant role for the stability of the region. In this framework, the EU energy dialogue with the GCC members can play a significant role among the others of the Gulf.

### 2.1.3. North Africa

Energy dialogue with North Africa has been in focus since 1995 Declaration of the Barcelona adopted at Euro-Mediterranean Conference, which aimed to promote cooperation in the field of energy. After this conference, the Euro-Mediterranean Forum was established in 1997. The Forum targeted at securing energy supplies to European members and establishing an energy free trade area within the Mediterranean Sea region. It suggested that an energy market be set up around the Maghreb[99] by establishing gas and electricity networks.

Especially, southern European countries – France, Italy, Spain, and Portugal – are dependend on energy supplies coming from the North African countries. The reason is ,first that their geographic proximity facilitates their accessions to oil and gas reserves of the region; second that northern African countries have the potential for meeting these countries' needs. The demand of the EU in natural gas has increasingly grown because of its targets under the Kyoto Protocol (mentioned in the environment section). This situation

[99] The term 'Maghreb' means west in Arabian language, it includes Morocco, Algeria,Tunisia, Libya and Mauretania which is known North Africa.

has entailed the EU to produce its electricity from natural gas. As a result, the importance of the North African countries has been increased, especially of Algeria, which is by far Europe's largest supplier of LNG. The countryt meets roughly 65% of EU's total LNG;[100] 12% of Europe's total gas demand;[101] and exports nearly 75% of its crude oil to Western European countires (the main consumer is Italy, and it is followed repectively by Germany, France, the Netherlands, Spain and the UK).[102] In this regard, some main projects have been under consideration such as MEDGAS between Algeria and Spain and GALSI between Algeria and Italy,[103] which are parts of Trans Euro-Mediterranean pipelines system. As to electricity, Algeria, Tunisia and Morocco have taken some inititatives, aiming for the period 2003-2006, to serve conditions necessary to establishment of a Maghrebian electricity market, and thus entering into the internal electricity of the EU for future.[104]

As a consequence, the establishment of gas and electricity interconnections between the EU and North Africa shows that the energy dialogue with the region would be going on for the long term. With related to this, the 2003 Euro-Mediterranean energy forum declared that this development is an important step towards establishing an energy partnership

[100] EUROGULF, Op.cit., p. 42 of 55.
[101] Chakib Khell, "Ministerial Summit on gas pipe: Algeria-Italy via Sadinia", Rome, 14.04.2003. Available at: http://www.mem-algeria.org/actu/ministre/allocutions/summit_gaspipe_dz-it.htm (01.10.2005)
[102] Aristotelis Pavlidis, "Energy and the Environment in the Mediterranean", *Committee Reports*, NATO Parliamentary Assembly, 2003.
[103] Khell, *Op.cit.,* http://www.mem-algeria.org/actu/ministre/allocutions/summit_gaspipe_dz-it.htm (01.10.2005)
[104] "Ministerial Declaration of the Euro-Mediterranean Energy Forum", Athens, 21.05.2003.

between both sides, and generally between the EU and the Mediterranean region as well.[105]

### 2.1.4. The Caspian Basin

After the disintegration of Soviet Union in 1991, the West has turned its eye to the new independent states emerged from the Caspian region because of diversifying their energy supplies. The Caspian basin can be seen as an alternative supplier to the EU due to declining of its oil and natural gas reserves in the North Sea.[106] The Green Paper of 2004 on 'study on energy supply security and geopolitics' states that the Caspian region should be seen as a good opportunity for reducing the Union's import dependency on the Persian Gulf oil, and explains for gas that the region could contribute to the EU for balancing its gas dependency on Russia and control the development of gas reserves located in the Gulf. In addition, according to Richard Skolosky, the Caspian oil reserves would decrease pressure on the production capacity of the Persian Gulf region and help prevent oil disruptions coming from the Gulf and other producers.[107] However, for the foreseeable future, the political, geographic, financial and technical

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[105] *Ibid*.

[106] Mehdi Parvizi Amineh, "Caspian Energy: A viable alternative to the Persian Gulf?", *The European Institute for Asian Studies (EIAS)*, Brussels, 2003.

[107] Richard Skolosky and Tanya Charlick-Paley, "NATO and Caspian Security: A Mission Too Far?", *RAND Publications*, Washington, 1999, p. 69.

constraints on energy development in the Caspian basin will hinder making a significant contribution to oil and gas supplies to the EU.[108]

In 2004, a ministerial conference on energy cooperation among the EU, the Caspian region countries and their neighbours was held. The conference focused on harmonizing the legal and technical standards in the energy sectors; promoting management of energy supply and demand; ensuring security and safety of energy supplies; and supporting their privileged projects such as pipeline ones.[109]

The EU has made cooperation with especially Azerbaijan and Kazakhstan countries of the region under the mechanism of TACIS program. Numerous projects of oil and gas pipelines have been proposed to transport Caspian region supplies to European energy market. Some of them are as follows: firstly, oil pipelines from the Caspian to the Black Sea – one connecting 'the Tengiz field in Kazakhstan with the Russian terminal at Novorossysk' and other linking 'the Chiarg oil field in Azerbaijan with Soupsa in Georgia' – then oil from these fields is tranported by tankers to Bulgaria or Romania, or 'directly into the Mediterranean, through the Bosphorus';[110] the other oil pipeline is Baku-Tbilissi-Ceyhan (BTC), completed in May 2005, having 1768 kilometres long, connecting the Caspian Sea to the Mediterranean Sea. It is

[108] Richard Sokolsky and Ian Lesser, "Threats to Western Energy Supplies: Scenarios and Implications", Chapter 2 (in) *Persian Gulf Security: Improving Allied Militay Contributions,* ed. Rechard Sokolsky, Stuart Johnson, and F. Stephen Larrabee, RAND Publications, 2001, p. 19.
[109] Andris Piebalgs, "Baku-Tbilissi-Ceyhan pipeline is a milestone project for security of supply", *Speech on BTC pipeline opening ceremony*, Baku, 25.05.2005.
[110] Steve James, "European Union prepares its energy security", 2003, available at: http://www.wsws.org/articles/2003/aug2003/eupo-a13.shtml

worth mentioning the BTC more because of having transatlantic importance. Its construction was financed hugely by British Petroleum (BP), partly by other European companies and also partly by the US, which has been given a significant role to plays as a guarantor in the region by establishing its military bases, thus balancing Russia dominance on the region. The BTC pipeline was built to promote energy security of the EU and the US,[111] by transporting over 1 million barrels of oil per day, when it fully starts to send oil to the global market.[112] Besides, the pipeline would relieve maritime transport, namely 7400 tankers carried 122 million tons of oil through the Bosphorus Strait,[113] which constitutes a main environmental challenge that affects energy security policy of the EU. Moreover, the BTC pipeline has been considered to will be coupled with a nutural gas pipeline connecting Baku, Tbilissi and Erzurum by 2006.[114] As a result, both the EU and US have underscored Caspian basin energy reserves for reducing their import dependencies on the Gulf region, thus enhancing their energy security by construction many important pipeline systems which ensure the flows of oil and gas from the region to their market.

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[111] Piebalgs, *Op.cit.*, *Speech on BTC pipeline opening ceremony*, 25.05.2005.
[112] "New Caspian pipeline to secure Western oil supply", http://www.euractiv.com/Article?tcmuri=tcm:29-142665-16&type=LinksDossier (02.08.2005)
[113] Piebalgs, *Op.cit*., Speech on BTC pipeline opening ceremony, 25.05.2005.
[114] "Caspian-Mediterranean Oil Pipeline Launched In Baku", http://www.rferl.org/featuresarticle/2005/05/18A9DC83-9F19-4830-AEA2-93A850B985FA.html (06.10.2005)

### 2.1.5. EU International Programs

The EU has created various international programs after the Cold War era, aimed at promoting cooperations with Russia and other the FSU countries including energy dialogue and protecting investments in their markets covering energy sectors.

#### 2.1.5.1. TACIS

Technical Assistance to the Community of Independent States (TACIS) program was set up in 1991, provided financed technical assistance to countries of Eastern Europe and Central Asia e.g. € 4.221 million spended in 1992-1999, including regional and cross-border coopeartion by € 479 million.[115] The program focused on energy, transport and telecommunications networks; environment; and justice and home affairs. The TACIS program has promoted the implementation of Partnership and Cooperation Agreements (PCAs).[116] These agreements have given the TACIS a status playing a strategic role in cooperations processes, including energy cooperation, between the enlarged EU and and its partners.

#### 2.1.5.2. TRACECA

Transport Corridor Europe-Caucasia-Asia (TRACECA) program was established in 1993 to create transport and trade corridor, covering energy

[115] Ioannis S. Samouilidis, "IEA Workshop on Caspian Oil and Gas Scenarios: Overview of recent Caspian Developments in the European Union's Policies and Programmes", *European Commission DG TREN / C: Conventional Energy,* Paris, 11.11.2002.

[116] "Russia and the other countries of the former Soviet Union", http://www.europarl.eu.int/facts/6_3_4_en.htm (05.10.2005). PCAs was bilaterally signed between the EU and Russia, Ukrania, Belarus, Moldova, Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Uzbekistan, and Turkmenistan between 1994 and 1996, entered into force since 1997.

products, from the East to West (from Central Asia, across the Caspian Sea, through the Caucasus, and across the Black Sea to Europe)[117], which is considered as the 'Historical Silk Road'.

#### 2.1.5.3. INOGATE

Interstate Oil and Gas Transport to Europe (INOGATE) program was launched in 1995. The objective of the INOGATE is to improve energy supply security of the Union by developing integration of oil and gas pipelines (across the Caspian, through Black Sea region to Europe); providing technical assistance on upgrading the existing infrastructures and developing new projects; improving regional cooperation; protecting foreign investments; and facilitating the flows of energy supplies of the regions towards the European energy market.[118] Moreover, under the INOGATE program an Umbrella Agreement was signed in 1999 by Kazakhstan, Uzbekistan, Turkmenistan, Romania, Bulgaria and Macedonia. It established a legal framework on cross-border energy transit to be considered for overcoming some barriers on energy infrastructure that have arisen since the disintegration pipeline systems of the Soviet Union.[119]

On the other hand, for other regions such as the Persian Gulf and Africa as well as Latin America, the EU has established SYNERGY and MEDA programs which have targeted at improving economic goals of the EU

[117] Keith Fisher, "A Meeting of Blood and Oil: The Balkan factor in Western energy security", *Journal of Southern Europe and the Balkans*, Vol.4, No. 1, May 2002, p. 2.
[118] *Ibid*.
[119] TACIS annual report 1998, COM(99) 380. Available at: http://europa.eu.int/comm/external_relations/nis/tar98/regional.htm

specifically in energy sectors, promoting energy dialogue between the EU and these regions. To sum up, thanks to these international programs, the Union ensures energy dialogue with its main producers, creates an investment climate for its companies, and thus enhances its energy supply security.

In conclusion, the EU has tried to strengthen its energy dialogue with producing and transit countries to guarantee its energy supplies security. In this sense, the Union has aimed at setting up electricity and gas markets via integration of networks and pipelines systems; signing some legal agreements to secure foreign investments, establishing many energy working groups to expand energy cooperations; helding many conferences and meetings on this topic; creating a free trade areas within its suppliers. In addition, thanks to its energy cooperation with these regions, the EU has gained a significant role to play as an important political actor in these areas to balance influences of the US and Russia.

### 2.2. Energy Supply Security and Economy

Economic dimension of energy supply security is defined as the vulnerability of the market economy. A stable and secure energy market plays a key role to hinder this vulnerability. To create such a market, the principles of competitiveness, openness, transparency and efficiency are needed, which are all the elements of a fully integrated energy market. In this regard, the European Commission has aimed at establsihing an internal energy market at the Community level since 1980s, when liberalization in the global market had been created.

### 2.2.1. The Completion of the Internal Energy Market

Since the establishment of the Community, competitiveness in oil and coal sectors has been carried out, hence the movements of coal and oil products have been free among the member states. However, the situation in electricity and gas sectors was different. In all European countries, these sectors were under monopolistic policies: production, transportation and distribution of elctricity and gas supplies were managed by state-controlled energy undertakens; entrepreneurs were usually entirely from public sectors; investments were planned under state supervision and prices were determined by the state. [120] As a result of these monopolistic conditions, many separate national markets were created in each member state. Thus, the objective of establishing an internal energy market has been to integrate these separate electricity and gas markets of member countries. Thereby, this section examines creating an internal energy market within gas and electricity sectors within the EU by emphasizing on liberalizing these sectors; integration of main pipelines and grids; and implementation of an effective energy crisis management.

[120] Oiviero Bernardini, "Natural Gas in South East Europe: Investment, Transit, Trade – the Regulation of the Gas Sector and Its Implications for Gas Trade", *Italian Regulatory Authority for Electricity and Gas*, 2004, p.2.

#### 2.2.1.1. Liberalization of Electricity and Gas Markets

Liberalization of electricity and gas sectors in Europe began with directives of 1990s (Directive 96/92 for electricity liberalization and Directive 98/30 for gas liberalization), except the UK which started its liberalization in the late 1980s. These directives aimed at building a truly integrated single energy market by unbundling of activities in these markets that were the vertically integrated monopolies, accessing to networks and aiming market opening towards increasing energy efficiency that is required for the liberalized market. However, due to some major problems in member states such as the different degrees of market opening, lack of transparency in their markets and continuing of monopolistic conditions the implementation of these directives were slow in progress. In response to these shortcomings, the European Parliament and the Council adopted a second set of electricity and gas directives in June 2003. They focused on full market opening for all non-household customers by July 2004 and all customers by July 2007; legal unbundling of transmission and distribution companies; third party access to networks on the basis of regulated tariffs; monitoring of security supply; and the establishment of a regulatory authority in all member states. Carrying out these measures in effective way could contribute to a more competitive and efficient energy market.

The current market openings in the electricity and gas sectors are detailed in Table 1: five member states fully opened; some opened more than 50 percent; and the rest opened less than 50 percent, thereby this process is going on. It is seen that most of member states have principally opened their electricity and gas markets to competition, which provides "greater market efficiency".[121]

[121] Claude Mandil, "Challenges for Energy Policy – Corporate Strategies: Europe in the Global Energy System", *International Energy Agency (IEA)*, Germany, 2003, p. 3.

**Table 1. Market Openings in Electricity and Gas Sectors by % on 1 March 2004**

| Member States | Electricity Market Opening | Gas Market Opening |
|---|---|---|
| Belgium (BE) | 80% | 83% |
| Cyprus (CY) | 0% | 0% |
| Czech Republic (CZ) | 30% | 0% |
| Denmark (DK) | 100% | 100% |
| Germany (DE) | 100% | 100% |
| Greece (EL) | 34% | 0% |
| Spain (ES) | 100% | 100% |
| Estonia (EE) | 10% | 80% |
| France (FR) | 37% | 37% |
| Hungary (HU) | 30% | 0% |
| Ireland (IE) | 56% | 85% |
| Italy (IT) | 66% | 100% |
| Latvia (LV) | 11% | 0% |
| Lithuania (LT) | 17% | 80% |
| Luxemburg (LU) | 57% | 72% |
| Malta (MT) | 0% | 0% |
| The Netherlands (NL) | 63% | 60% |
| Austria (AT) | 100% | 100% |
| Poland (PL) | 51% | 34% |
| Portugal (PT) | 45% | 0% |
| Slovakia (SK) | 41% | 33% |
| Slovenia (SI) | 64% | 50% |
| Finland (FI) | 100% | 0% |
| Sweden (SE) | 100% | 51% |
| The United Kingdom (UK) | 100% | 100% |

Source: The Pocketbook (2004) of European Commission "European Union Energy & Transport in Figures" in cooperation with Eurostat, 2004.

Although these markets have formally been opened to competition, there are some difficulties to fully achieve liberalization, and thus integration of these markets. First, there are differences in the degree of market opening and existing institutions among members towards liberalization.[122] Second, in many EU countries, national electricity markets are dominated by few companies that have big percentage of generation of electricity, namely in Belgium 96% by two companies, in Ireland 97% by one company, in Greece 97% by one company,[123] in Italy 65% by ENEL Company and in France 85% by EDF Company.[124] In order to completely open their markets to competition, for example, the ENEL of Italy and the EDF of France have been required to sell of 15,000 MW and 6,000 MW generation capacities per year, respectively.[125] The last is that existing interconnection capacities are not adequate, especially in the connections of Italy-France, Spain-France, continental Europe-England and continental Europe-Ireland.[126] These barriers prevent a proper functioning of a single energy market.

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[122] A.M. Klom, "Electricity Deregulation in the European Union", *Energy in Europe*, No. 27, p. 6, available at:
http://europa.eu.int/en/comm/dg17/27klom.htm. (20 April 2005).

[123] Fakir Hüseyin Erdoğan, "AB'de Elektrik Piyasaları", (in) *Avrupa Birliği'nin Enerji Politikası ve Türkiye'ye Yansımaları 1: AB'de Enerji ve Rekabet - AB'de Elektrik Piyasaları (Energy Policy of the European Union and Implications for Turkey I: Energy and Competition in the EU - Electricity Markets in the EU)*, Speeches at Conference, Ulusal Politika Araştırmaları Vakfı (National Policy Research Foundation), Ankara, 2003, p.127.

[124] Tooraj Jamasb and Michael Pollitt, "Electricty Market Reform in the European Union: Review of Progress toward Liberalisation & Integration", Cambridge University, March 2005, p. 12.

[125] *Ibid*.

[126] *Ibid*., p.25.; CEC, COM(2002) 321 final, *Op.cit*.; and Erdoğan, *Loc.cit.*

### 2.2.1.2. Diversification of Supply Routes

Developing and construction of electricity grids and gas pipelines play a key role for integration of gas and electricity sectors. The construction of new interconnections is essential for the energy market of the enlarged Europe to function effectively and to guarantee future energy supplies of the EU.[127] In this respect, the EU has given a priority to the Trans European Networks (TENs) project. The project has aimed to integrate the electricity and gas systems of all European countries. Under the guidelines of TENs mechanism, the South East Europe Electricity Regulation Forum (SEEERF) or Athens Forum was established. The Forum targeted at establishing a regional electricity market in the South East Europe and integrating the region into the EU internal energy market. A number of strategic electricity interconnections have been identified in the SEEERF: "the reconnection of the Ernestinovo and Mostar lines in Croatia/Serbia/ Bosnia-Herzegovina; the completion of the Western North-South Connection through Elbasan in Albania; the strengthening of the Greece–Bulgaria links; and the strengthening of the Greece-Italy and the Greece-Turkey links (Ipiros–Puglia and Philippi-Hamidabad).[128] According to the Commission, these projects should benefit from possible support funding under the TENs mechanism.[129] With respect to gas, two pipeline projects – Turkey-Bulgaria-Romania-

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[127] CEC, COM(2002) 488 final, *Op.cit*., p. 3.
[128] European Commission (EC), "Energy Policy in South East Europe: Regional Approach to Energy Supply", http://europa.eu.int/comm/energy/electricity/south_east/doc/2003_memo_energy_south_east_en.pdf (11.09.2005) p. 6
[129] *Ibid*.

Hungary-Austria, and Greece-Former Yugoslav Republic of Macedonia-Serbia-Bosnia-Croatia-Slovenia – have been identified.[130] Moreover, in recent years, the major new gas transmission infrastructures have been established such as in the UK, Germany, Austria, Portugal, Greece and western Spain.[131] The improving of TENs project contributes to electricity and natural gas supply security of the EU.

#### 2.2.1.3. Energy Crisis Management

A physical disruption of oil and gas causes instability in the price security system, and thus creates volatility in oil and gas markets which affects the economy as a whole. During such an energy crisis, emergency stock systems of oil and gas play a key role. These systems enable member states to successfully overcome this certain period by releasing the oil and gas stocks from their storages.

All member states have different emergency oil stock systems: in some emergency oil stocks are holded by stockholding bodies and in the others holded by private oil companies. Due to this fragmentation, the Commission recommends that each member state should establish a public oil stockholding body, which will own stocks representing at least 40 days' consumption.[132] Moreover, member states can hold their emergency stocks on another EU member state's territory. In this point, between the state and

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130 *Ibid*.
131 CEC, Communication from the Commission to the Council and the European Parliament, "Completing the Internal Energy Market", *COM(2001) 125 final*, Brussels, 2001. p. 17.
132 Proposal for a Directive of European Parliament and of the Council – conserning the alignment of measures with regard to security of supply for petroleum products, *2002/0219 (COD)*, 2002.

the stocks holding state an intergovernmental agreement should be signed and this must be reported to the European Commission.[133] To ensure a regular oil supply at affordable prices, the current minimum level of security stocks corresponding to 90 days'consumption should be increased to 120 days.[134] On average, the Union security stoks are recently about 114 days of internal consumption.[135]

The situation for emergency stock system in gas sectors of the member states is different. The EU gas demand and import dependecy rapidly increase; thereby, the avalibility of gas stocks are increasingly required. In an energy crisis, joint and coordinated mechanisms have to be implemented. Each member state needs to carry out a combination of measures including gas storage. In this respect, all members would define their national objectives and also the Commission would monitor gas supply and take measures to ensure continuity of the supply for the long term.[136] Stockholding obligation for gas is 60 days, and each member state must achieve this obligation. However, average gas storage capacity at EU level is equivalent to approximately 50 days of gas consumption. Some members are very lucky such as Austria holds stocks for 115 days and Denmark for

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[133] Robbert Willenborg, Christoph Tönjes and Wilbur Perlot, "Europe's Oil Defences: An analysis of Europes's oil supply vulnerability and its emergency oil stockholding systems", *The Clingendael Institute*, The Hague, January 2004, p. 41.

[134] *Ibid*., p. 46.

[135] CEC, COM(2002) 488 final, *Op.cit*., p.15.

[136] Sue Hankey, "Co-generation of heat and power", *Oil, Gas & Energy Law Intelligence*,Vol. I, No. 1, January 2003. Available at: http://www.gasandoil.com/ogel/samples/freearticles/practitioner_08.htm; and ; Elly Plooij- van Gorsel, "Improving the Security of Energy Supplies: Oil and Gas", http://www.plooij.nl/nederlands/toespraken/089.htm (20.09.2005)

roughly 65 days. Unlikely the UK, Greece and the Netherlands hold their stocks for 10-20 days, and also some members have no gas storage capacities.[137] To fulfil this obligation of 60 days' consumption, members whose gas storage capacities under this obligation must increase their gas storage capacities. The availibility of gas storage plays a key role for the security of gas supply.

An effective stock management system contributes to the functioning of the internal energy market by implementing its rules and improving member states' readiness to overcome any energy crisis generated from physical disruption of oil and gas and limiting volatility of market.

Moreover, improving energy efficiency and saving, especially in building and transport sectors, and promoting new and alternative energy sources help to limit the growth in demand that reduces dependency of the EU on external energy supplies. (Energy efficiency and renewable energies are explained in environment section). These are the significant tools of an effective energy demand management which reduces fluctuation of demand by providing the stability of oil and gas prices.

To sum up, liberalization of these sectors, which creates more competitiveness, transparency and efficeincy; establishment of new networks and pipeline systems, especially in eastern and southern countries of Europe after its enlargement; strategic stock systems within member states and

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[137] Proposal for a Directive of European Parliament and of the Council – conserning measures to safeguard security of natural gas supply, *2002/0220 (COD)*, 2002.

solidarity among them during any supply disruption; and energy efficiency and saving for decreasing demand growth, thus reducing the external dependency are requirements of the internal energy market to function properly which is main tool to secure energy supplies of the EU.

### 2.3. Energy Supply Security and Environment

The EU is highly dependend on fosil fuels which generate 94% of EU's greenhouse gas (CO2) emissions[138] that cause global warming, which constitutes a main challenge to climate change. This situation has pushed the Union to consume energy supplies that have less CO2 emissions such as natural gas, promote production of renewable energy sources and improve energy efficiency and saving. In this framework, the EU signed the Kyoto Protocol that entails it to take many measures that affect its energy supply security positively and negatively.

#### 2.3.1. The Impact of the Kyoto Protocol on EU Energy Supply Security

The Kyoto Protocol is a universal protocol under the mechanism of the United Nations Framework Convention on Climate Change of 1992, and was signed in 1997. Its aim is to reduce CO2 emissions, and also promote sustainable development. The EU ratified the Protocol in 2000, and has committed itself to reduce 8% of its greenhouse gas emissions by the period

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[138] European Commission (EC), "Multiannual Action Programme 2003-2006: Intelligent Energy For Europe", Memo, 2003. At available: http://www.europa.eu.int/comm/energy/res/intelligent_energy/doc/memo_en.pdf

2008-2012, which is below 1990 levels.[139] To achieve this purpose, the Union has promoted production of renewable energy sources and energy efficiency and saving by developing high technology that reduces consumption of fosil fuels.

#### 2.3.1.1. Promoting Use of Renewable Energy Sources

Development of renewable energy sources[140] automatically limits the import dependency of the EU because of the fact that these sources are domestically produced. To increase using of renewable energies, the EU has stated that their consumption from 6% of 1996[141] should be reached to 12% by 2010.[142] It has created such important actions to reach the target. In this regard, the Commission issued a Drective in 2001,[143] which declared that 22.1% of EU's electricity consumption should be produced from the renewable energies by 2010. The other action is the Program of Intelligent Energy for Europe.[144] It provided financial support for promoting renewable energies. A budget of € 215 million was foreseen for the period of 2003-2006, including energy efficiency. Improving renewable energies could

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[139] CIEP, Final Report on Green Paper of 2004, *Op.cit*., p. 224.

[140] Renewable energy sources include hydro power, biomass (solids, biofuels, landfill gas, sewage treatment plant gas and biogas), wind, solar (PV, heat, thermal electric), geothermal, wave and, tidal energy.

[141] Tuğrul Arat and Sanem Baykal , "Avrupa Birliği Çevre Politikası Bağlamında Yenilenebilir Enerji Kaynakları ve Türkiye", (in) *AB'nin Enerji Politikası ve Türkiye, (Energy Policy of the EU and Turkey),* (Eds Yavuz Ege, Gamze Öz, Tuğrul Arat, Sanem Baykal, Aylin Ege, Meliha Benli Altınışık and Hakan Ercan), (Ankara: UPAV Press), May 2004, p. 85.

[142] PJ Runci, "Energy R&D in the European Union", *Battelle Memorial Instıtute*, 1999, p.17.

[143] It is on the promotion of electricity produced from renewable energy sources (RES-E-Directive) of 2001.

[144] EC, *Op.cit*., "Multiannual Action Programme 2003-2006: Intelligent Energy For Europe", Memo, 2003.

enhance supply security of the Union by decreasing demand generated from external energy sources.

### 2.3.1.2. Improving Energy Efficiency and Saving

Energy efficiency and saving in building and transport sectors are key to reduce greenhouse gas emissions because of their huge shares of consumption. The building sector consume 40% of total energy consumption of the EU. The Commission estimates that it is possible to save around 22% this consumption if the efforts were taken.[145] One third of energy consumption in a building is consumed by lighting. Saving can increase to 50% or even more: "an energy-saving bulb uses five times less current than a standard one".[146] Likewise, the transport sector covers 32% of energy consumption that causes 28% total CO2 emissions of the Union. [147] In this sector, 20% of petrol and diesel used in road will be replaced by alternative fuels, including biofuels, in 2020.[148] Upgrading railways, investment in TENs and harmonization of fuel taxes are all tools for achieving this goal.[149] In this sector, the objective of the EU for reducing CO2 emissions is 5 to 10% energy savings in the short term, and 50% energy savings per passanger-kilometre and per payload-kilometre in the long term.[150]

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145 CEC, COM(2002) 321 final, *Op.cit*., p. 4.
146 Commission of the European Commmunities (CEC), Green Paper "on energy efficiency or doing more with less", COM(2005) 265 final, Brussels, 2005, p. 22.
147 CEC, COM(2002) 321 final, *Loc.cit*., p. 4.
148 *Ibid.*
149 *Ibid.*, pp. 4-5.
150 Commission of the European Communities (CEC), Communication from the Commission to the Council, the European Parliament the Economic and Social Comittee and the Comittee of the

Cogenaration technology is also important to improve energy efficiency and saving. This technology meets 13% of the Community's current electricity demand.[151] Green paper on 'energy efficiency' states that each member state will have to implement this technology for the future.[152] It is expected that 18% of electricity production in the EU will be met by cogenaration technology.[153] For this technology and other instruments that increase energy efficiency and saving, the Commission developed SAVE program that finances energy efficiency, i.e. a budget of € 66 million for a period between 1998 and 2002 was provided.

Moreover, for implementing the objective of the Kyoto Protocol, the share of nuclear energy in total energy consumption is discussed due to containing less CO2 emissions. This matter is on the agenda of the Commission. The former Energy Commissioner, Loyola de Palacio, mentioned the significance of nuclear energy for this aim at the some important conferences, and also this topic has been explained by some important papers such as Green Paper of 2000 on 'towards a European strategy for the security of energy supply'.

Consequently, implementing the Kyoto Protocol measures affects the Union energy supply security policy both positively and negatively. Promoting the share of renewable energy sources in total energy supply decreases EU's import dependency; on the other hand, reducing production of coal by the

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Regions, "Action Plan to Improve Energy Efficiency in the European Community", COM(2000) 247 final, Brussels, 2000, p. 8.

151 Commission of the European Commmunities (CEC), Green Paper "on energy efficiency or doing more with less", COM(2005) 265 final, Brussels, 2005, p. 27.

152 *Ibid.*

153 CEC, COM(2000) 247 final, *Op.cit.*, p. 4.

replacement of natural gas makes the EU more dependent on external energy supplies becasue of the fact that it is indenigously produced within the EU members, especially the some new member states are greatly consumer of coal, i.e. Poland 66%, Czech Republic 52% and Estonia about 52%.[154] As a result, the efforts to protect the environment by reducing CO2 emissions in compliance with the targets under the Kyoto Protocol have an influence on energy choices of the EU and its members. It should be seen that the future development of energy sectors of the EU members could increasingly correspond with these targets, which serve as the aim of sustainable development for the Union and the world as well.

### 2.4. Conclusion

EU energy supply security faces main challenges: growing import dependency; political unrests and economic stagnations within its external suppliers, especially the Gulf region; enlargement; a risk of interruptions of oil and gas; oil price volatility; creating an internal energy market; and climate change. On the other hand, to overcome these challenges, the EU has underscored its priorities as follows: promoting energy dialogue between consumers and producers; diversifying supply routes and energy sources and technologies; creating investment climate for protecting foreign investors; establishing a competitive, an open and efficient energy market at the Community level; improving energy efficiency and saving; and increasing use

[154] International Energy Agency, "Figures of International Energy Agency", http://www.iea.org/Textbase/press/pressdetail.asp?PRESS_REL_ID=142 (21.05.2005)

of renewable energy sources. All the arranged elements are required to guarantee security of EU energy supplies.

# CONCLUSION

In the aftermath of the Cold War, the meaning of security, including energy security, has gained the new dynamics such as, political, economic, social, environmental, etc. In this framework, the European Union security and defence policy has been developing by military means as well as civilian means. In this respect, the Union signed some treaties such as the Maastricht, Amsterdam and Nice that established the essence of the ESDP.

Energy security plays a key role among the other elements of the European Union energy policy, namely competitiveness and environment protection. However, it is indirectly related to the two dimensions and geopolitical events. In this regard, this study has focused on three dimensions of energy security: political, economic and environmental.

European Union dependency on imported energy supplies will increase substantially in the coming decades and the uninterrupted flow of energy will mainly depend on the political and economic stability of the producer regions: The Persian Gulf region, Russia and North Africa. The security of supplies in oil and gas largely depends on the stability of the Persian Gulf and Russia. For this aim, the EU has focused on political and economic sustainability in the producer regions/countries to guarantee the long term security of supply of oil and gas. Given the current level and kind of instability in these regions, the realisation of a more stable situation will take time. Sustainable prosperity in the oil and gas producing regions will also help the general security situation of the larger EU, particularly when these countries/regions can also attain better domestic political accountability and develop proper governance systems. The EU should make efforts to assist these countries for overcoming their current political and economic difficulties. Close coordination in energy policy within the EU will be the most effective way of helping to reduce its exposure to international and geopolitical tensions. Rising dependence on imported oil and gas created a new opportunity for the EU to build common approaches to energy strategies.

The economic aspect of security in general is defined as the vulnerability stemming from the market economy. Energy is the key input for an economic system and is widely used in industry, residential and transport sectors. Therefore, the price of energy can influence the overall competitiveness of an economic system. The European economy is based mainly on fossil fuels (oil, gas, coal) almost two thirds of which are imported. One of the most important energy policy goals of the European Commission is the creation of a single and an integrated European energy market. In the short term, the liberalisation of gas and electricity markets requires a diversification of grids and gas-pipelines, and of physical supplies as well that are needed to avoid energy supply interruptions and to maintain the possibility to choose a more competitive supplier. In the longer term, security of energy supply needs a favourable investment climate and incentives for new gas supply projects and infrastructures, and consequently requires stable relations with extra-EU gas supply countries.

As to environment dimension of energy security, the integration of sustainable development into energy strategy creates a new context for energy security as it constitutes a challenge for energy consumption in Europe. Development and application of new energy technologies, such as fuel cells, energy conservation technologies, and also the targets of doubling of the renewable energy sources in the next decade will contribute to a strong decrease in energy dependency of the EU on external supplies. The development of producing energy from renewable sources is a priority that will help both reducing dependency on imports and cutting environmental pollution. Reducing the amount of carbon dioxide emissions by industries of the member states is an important step towards implementing the measures of the Kyoto Convention on climate change and protecting the environment.

In sum, it should be seen that ensuring the security of energy supplies of the EU by the ESDP is dependent on civilian means rather than military means.

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