NEAR EAST UNIVERSITY

GRADUATE SCHOOL OF SOCIAL SCIENCES

EUROPEAN UNION RELATIONS

EUROPEAN UNION RELATIONS GRADUATE PROGRAM

MASTER THESIS

EUROPEAN UNION ENERGY POLICY: MEDITERRANEAN DIMENSION AND ASPECTS OF ENERGY GEOPOLITICS

FATOŞ ŞAN

20102284

THESIS SUPERVISOR

ASST. PROF. DR. ALİ DAYIOĞLU

NICOSIA, 2015

ÖZET

AVRUPA ENERJİ POLİTİKASI: AKDENİZ BOYUTU VE JEOPOLİTİK DURUM

FATOŞ ŞAN,

YÜKSEK LİSANS TEZİ,

NİSAN, 2015

TEZ DANIŞMANI: Prof. Dr. ALİ DAYIOĞLU

ÖZET: : Avrupa enerji politikasındaki gelişmeler ve ayni zamanda Akdeniz bölgesinin Avrupa Birliği ile olan ilişkileri enerji bazında incelenmiştir. Avrupa enerji pazarının karşılaştığı zorluklar enerji kaynaklarının geleceği ile ilgili muhtemel öngörüler ele alınmıştır. Avrupa Birliği enerji politikalarının yeni durumu ve bunun Akdeniz boyutu ile Avrupa Birliğinin Akdenizle enerji temelindeki ilişkileri ele alınmıştır. İlaveten, arz-talep durumu gözlemlenmiştir. Devamında, Avrupa enerji güvenliği bakımından Akdeniz'in kapasitesi ele alınmıştır. Bunun yanında, Doğu Akdeniz ve Hazar bölgelerinde keşfedilen yeni enerji kaynakları bölgesel enerji merkezi bağlamında analiz edilmiştir. Son olarak enerji ile ilgili olarak gelecekteki eğilimler ve jeopolitik enerji politikaları bakımından muhtemel yönelimler yeni rezervlerle birlikte incelenmiştir.

Anahtar kelimeler: Avrupa Enerji Politikası, Akdeniz, Enerji, Jeopolitik.

ABSTRACT

EUROPEAN ENERGY POLICY: MEDITERRANEAN DIMENSION AND ASPECT OF GEOPOLITICS

FATOŞ ŞAN,

Master Thesis

April, 2015

Thesis Supervisor: Assist. Prof. Dr. ALİ DAYIOĞLU

Abstract: The evolution of the European Energy Policy and also the relationship of the Mediterranean region with the EU are examined in the context of energy. European energy market dilemmas and the possible future prospects on energy sources were discussed. New developments of the EU energy policy and the Mediterranean dimension of this policy in energy geopolitics are analyzed in this thesis. First of all, historical evolution of the European energy policy and the relations with Mediterranean were examined. Moreover, EU energy market supply and demand revenues are observed. After that, Mediterranean capacity in the European energy security is examined. Also, new energy discoveries of Eastern-Mediterranean and Caspian region are analyzed in the concept of regional hub. Finally, future energy trends and possible shifts in the geopolitical energy policies with the new reserves are examined.

Key words: European Energy Policy, Mediterranean, Energy, Geopolitics.

ACKNOWLEDGEMENTS

First of all, I would like to express my deep gratitude to my thesis supervisor Assist. Prof. Dr. ALİ DAYIOĞLU for his guidance, patience, support, and motivation during my thesis period. I would like to express my special thanks to Vice Rector of the Near East University Prof. Dr. ŞENOL BEKTAŞ who gave me full support in research process on this topic.

My special thanks to my closest friends REMZİYE SEMAİ, NAZ ALAGÖZ and HURMUS ÖNGÖR for helping me survive all the stress and not letting me give up.

I would like thank my beautiful family for their invaluable assistance, without them the completion of this thesis could not be possible. For this, I dedicate my thesis to my family, my father OSMAN ŞAN, my mother ŞENAY ŞAN, my sister ORKİDE ŞAN. I also would like to thank my little angel, my niece SAHRA YILMAM who always gave me her infinite love during all my thesis time.

TABLE OF CONTENTS

PAGE

ABBREVATIONS

CO_2:	Carbon Dioxide
EAEC or EURATOM:	European Atomic Energy Community
ECSC:	European Coal and Steel Community
EC or EEC:	European Economic Community
ECU:	European Currency Unit
EESS:	European Energy Security Strategy
EMP:	Euro-Mediterranean Partnership
EU:	European Union
GHG:	Greenhouse gases
IGOs:	Intergovernmental Organizations
LOS:	Law of the Sea
MoU:	Monetary Union
RE:	Renewable Energy
ROC:	Republic of Cyprus
SCP:	South Caucasus Pipeline
TANAP:	Trans Anatolian Pipeline
TAP:	Trans-Adriatic Pipeline
UfM:	Union for Mediterranean
UNCLOS:	United Nations Convention on Law of the Sea
USA:	United States of America

INTRODUCTION

European Union is one of the significant players in the world politics which has twenty eight member states as of March 2015. As it size grows, it needed more energy sources. Energy has been one of the core policies of the European integration since the beginnings of the integration. European Coal and Steel Community (ECSC) and European Atomic Energy Community (EURATOM or EAEC) are the first attempts of the economic and energy cooperation which continue with the European Community (EC) which finally altered to the EU. Having a strong economy is also depending on reliable and streaming energy resources. Integration started on this main idea that economic recovery of the countries needs a secure access to the resources. Even, at the beginnings of the civilizations, we see that most of the settlements were located according to the easy access of the resources as water in the early ages. Today's world, energy is a key policy element and states even though people in the high technologic world need sufficient energy. "*European Union is the world's largest importer of energy (oil and gas) and also the second larger energy consumer*."[1]

According to International Energy Agency (IEA) world energy outlook, global energy demand will increase by one-third in 2035 where emerging economies assume to account 90% net growth of that demand.[2] It is predicted that European continent will be leading exporter of energy-intensive goods and household use of

[1] "Energy", European Neighbourhood Journalism Network, http://www.journalismnetwork.eu/index.php/_en/purpose/energy/ [18 October 2014].
[2] "Renewables", International Energy Agency , http://www.worldenergyoutlook.org/media/weowebsite/factsheets/WEO2013_Factsheets.pdf,[18 October 2014].

energy. EU energy consumption increases gradually nevertheless production has been decreasing because of scarcity of the resources and the environmental precautions. In order to supply its needs, EU imports large quantity of energy. As a consequence of this, EU tackles with energy dependency problem which one of the main objective of creating a common energy policy. European Commission introduces three main intents which are energy supply, diversification of the sources and key European element competitiveness. Together with them, low-cost and sufficient quantities are the important requirements of having sustainable energy policies in the EU. Environmental concerns and climate change also affected energy policy determinations. The rest of the world and EU also started to initiate environmental policies. Green energy sources like wind power and solar energy became more important than before. These developments affected EU relations with the neighbouring countries. Besides the other neighbouring area, Mediterranean appears a combination of complex relationships until 1990s. In the beginnings of 1990s, EMP established between the EU and Mediterranean partners including Middle-East, Maghreb and Mashreq countries. This partnership evolved to another phase namely Union for Mediterranean. The cooperation includes socio-economical, cultural integration with the region but energy left behind in these enhancements. The reason was the treaties of member states with the regional countries that were signed bilaterally.

In the mid 2000, EU started to change its energy policy priorities along with the shortages in production and big wave of enlargement. At the same time, trends in energy policies have been changing because of the new discoveries of resources and new technologies that enhance the relations in the world. Having and not having

sufficient resources is a significant element in the determination of foreign relations and also for the economical dependence. As of March 2015, EU reached twenty-eight members with different stands on energy. Politically, Energy was and still is intergovernmental matters for EU but the recent developments push the need for being a single voice. Ukraine crises proved the need for change and in November 2014, new European Commission has a vice president for Energy Union which is a huge step toward achieving it. Adding to this, Energy became main pillar in the European foreign relations. Russian sphere and Caspian region was the main area of policy in the energy but in recent developments shows the shift of attention to the other region like Mediterranean. The Mediterranean region is one of the policy areas that have a geostrategic importance where complexity of relations enabled. Member states from the region like Spain, Italy, Portugal and France have been engaging the states in the region bilaterally with Algeria, Tunisia, and Egypt. Historical links mainly post-colonial relations of France lead the relations and enhance the level of cooperation.

The main purpose of this thesis is analyzing the new developments of EU energy policy where Mediterranean region has its own geostrategic and geopolitical importance. Recent discoveries of East-Mediterranean and North Africa and also increasing significance of Algeria as a gas supplier to the EU could point to a specific energy partnership with the region. Also, Mediterranean countries are important gas suppliers and significant transit routes. Based on these developments, it answers of some important questions like how EU energy policy is changed with its Mediterranean dimension. What is the importance of Mediterranean to EU? What are the affects of recent developments in the region to the EU energy policy? Which

regional political and legal maritime disputes influence the relations? To be added, this thesis examined the evolution of increase in geopolitical position of Mediterranean in the light of energy and its effects on European energy policy

CHAPTER ONE: EUROPEAN ENERGY POLICY

1. Historical Evolution of European Energy Policy

After the World War II, Europe was devastated and one of the views that arise was the idea of integration. Nearly, there was no economy and also industry which tried to be overcome by Marshall Plan which was a financial aid plan for Europe from United States of America (USA) in 1948. The three main reasons of Plan were redeveloping the industries of European countries in order to compete in the world trade flow, controlling the European economies and ensure to supply of American goods to the European market.[3] Marshall Plan succeeded with an industrial progress leaded by the politicians like Robert Shuman and Jean Monnet which are called as the fathers of Europe. Sustainable economic growth depends on cheap and progressive energy resources. Consequently, energy has been one of the key objectives of the integration. The first aim was purely economic after the devastation of Europe in the World Wars, but in 1951 through Paris Treaty which established the ECSC, collaboration on energy established by founding six countries namely France, Germany, Italy, Belgium, Luxemburg and Netherlands. In 1957, European Economic Community (EEC) established as a continuation of the ECSC by the same states which deepens the economic cooperation. Continuously, in the recovery process, increasing of coal production was essential. Traditionally, Western European countries produce their own coal but increasing of demand and excess of use needed

[3] Baskın Oran, **Turkish Foreign Policy- Facts and Analyses with Documents, (**Utah: Utah University Press, 2010), p. 321.

a particular policy. ECSC provided wide range collaboration on mining sector and steel industry.

The second step of European energy pathway is EURATOM or EAEC in 1957 and rapidly entered into force in 1958 which aims form nuclear market specializing on developing nuclear power and ensuring research facilities in member states.[4] Success of these institutions paves the way for EEC with the aim of cooperation on economic benefits mainly common market. Along with these assessments, energy policies have been developing parallel with economical cooperation in the community. Overall of these, world economic order affects its progresses especially in early 1970s oil crisis in Europe. In 1973 Arab-Israeli War, Organization for Arab Petroleum Exporting Countries (OAPEC) put an embargo to Western Countries those who supported Israel. Also, this embargo enforced sparingly to the other states those which remained impartial.[5] As a result of this embargo, oil prices increases and transportation bring to an end. European Council adopted a programme on energy sources called "Multiannual Research Programme" in 1974 which aimed of decreasing the consumption, intensifying the security of supply and the importance of environmental protection on production and consumption of energy.[6] This program is the first act for creating a common energy strategy. After the second oil crisis in 1979, European Council needed to enhance the precautionary measures in 1980. These measures were decreasing the oil

[4] Treaty establishing the European Atomic Energy Community (EURATOM), http://europa.eu/legislation_summaries/institutional_affairs/treaties/treaties_euratom_en.htm[12 June 2014].

[5] Oil Producing and Exporting Countries (OPEC) put an embargo to countries those supported Israel especially USA and other western countries which resulted huge oil shortages and unstable oil prices. It is considered as a milestone for energy policy of USA and the world.

[6] Commission of The European Communities, C*ommission Proposes Revision of the Multiannual Research Programme. Information [CCR Research Programme] 64/74. 1974,* http://aei.pitt.edu/10349/1/10349.pdf [16 June 2014].

consumption and imports and ensuring a harmony between member states and aiming of energy policy of the community.[7] In 1985, EEC launched internal market which had huge support from its member states, but Internal Energy Market seemed more complicated because of the different energy infrastructures. In the white paper of internal market, energy issues turned into a big challenge. In 1988, Internal Energy Market included to the concepts with aiming competition and lower prices but had no achievement because of different national energy interests driven by monopolistic companies apart from diverse resources.[8]

Until the 1980s, EEC energy policy was regarded as a spectacular failure.[9] National interests and policies have been clashes with a common energy policy. However, measures that taken by Council raises the production in 1990s. Measures like energy saving in household use, industrial financial aids for energy saving and promoting aids for new energy-saving technologies. As a result, member states reduce their imports and put more effort on production which resulted surplus in energy demand and supply in terms of production.[10]

After the Cold War, European Community became union with a political identity and could overcome the economic divisions with Eastern Europe. Transformation of Eastern Europe though market economy also needed improvement in energy frameworks. Environmental issues and question of nuclear power in post-

[7] Arzu Yorkan, "Energy Policy of the European Union and Its Effects on Turkey", **Bilge Strateji**, vol. 1, no. 1, (2009), p.27.
[8] Janne Haaland Matlary, **Energy Policy in the European Union,** (UK: McMillan Press, 1997), p.15.
[9] S. George, **Politics and Policy in the European Community,** (Oxford: Oxford University Press, 1985).
[10] European Council Resolution , Official Journal of the European Communities, June 9,1980, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31980Y0618(02)&from=EN [15 September 2014].

Soviet states bring about new proposals. In 1994, European Commission initiated "The First European Energy Charter Treaty" for investors.[11] It includes early perspectives and it offered improving power stations in EU and especially in former Soviet Union, improving the legal framework and environmental protection in energy sector.

From 1990's onwards, exogenous factors also shape the progress of energy policy in Europe. Booming of world energy scarcity and discovering of new resources encourages international initiatives. In 1990, European Council adopted "European Energy Charter"[12] which was established internationally with 51 signatory states including Russian Federation and Asian countries like Turkmenistan, Kazakhstan, and Japan. This charter launches a legal framework of energy cooperation, energy efficiency and environmental issues. However, it failed to lead an international energy conference and remained weak to further cooperation. Environmental concerns which are main motivation for acting together in energy policies. In the era of new century, United Nations (UN) initiate Kyoto Protocol signed in Japan in 1997 with aiming reducing greenhouse gases by 30% till 2020 compared to 1990.[13] In 2014, EU increases its reduction target to %40. It will be discussed in details further.

[11] First European Energy Charter Treaty: Early Perspectives for Investors, European Commission Directorate General for Energy (DGXVII), Official Publication of the European Communities, Luxemburg, 1995.
[12] The Energy Charter Treaty and Related Documents, Energy Charter Secretariat, 2004, http://www.encharter.org/fileadmin/user_upload/document/EN.pdf [15 October 2014].
[13] Kyoto Protocol, United Nations Framework Convention on Climate Change, http://unfccc.int/kyoto_protocol/items/2830.php [10 September 2014].

Currently, EU launched a “European Energy Security Strategy” in May 2014 and targeted a common act in the energy security and supply.[14] It sets out strong long-term plans after the energy crises. It introduces eight pillar that; increasing the EU capacity to overcome further shortages, strengthen the emergency mechanism for crises management, moderating energy demand, building a working internal energy market, increasing energy production, developing energy technologies, diversifying external suppliers, enhancing the coordination of national energy policies and making a single voice in the external energy policy. The major decision is diversifying the suppliers and energy security pillar. For pursuing these aims, in the new European Commission that assigned in December 1, 2014 embody a new vice-president for responsible Energy Union which pushing concrete actions collectively.

1.1. European Energy Market

Since the beginning of European integration, cooperation stands on the aim of creating a shared, common energy market. Geographically, as of March 2015, EU covers twenty-eight industrialized member states with over 4 million $km^{2.}$ It is one of the huge markets in the world but also energy market, too. Most of the members are developed countries and energy production is very low which resulted energy shortages. Because of that, energy policy in Europe is a major issue since the beginning of integration. ECSC and EURATOM which is one of the founding pillars of the community that leads prospected the fore coming integrations. Despite that, it

[14] EU Commission (2014c). Communication from the Commission to the European Parliament and the
Council, European Energy Security Strategy, Brussels, 28.5.2014, COM (2014) 330 final, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0330&from=EN [15 October 2014].

failed to conduct any development of common energy policy. The main reasons were diverse national interests on energy policies and intergovernmental manners on energy resources of member states. Even though. Energy shortages and dependence of foreign suppliers affected economically EU and influences economical advances which also depend on sustainable energy resources.[15] In any case, European energy market has been growing as a single identity or vise-versa. In the Statistical pocketbook of European Commission 2014, EU-28 is the third consumer of world energy after China and USA with %12.9.[16] EU as the third biggest energy market also is a highly energy dependent region. Renewable energy is another alternative which rises in the recent years. As of March 2015, EU is the only regional actor that produces 50% of its electricity without greenhouse gases emissions which nearly 25% comes from renewable, the other produced from nuclear energy.[17] Scarcity of the resources and climate change concerns encourages the European countries to the clean energy. However, sustainability of the renewable still has been in the process of developing. Technological advances forwards the environmental friendly products but most importantly promising enhancement in renewable energy resources influence the further policies. As an example, Mediterranean region provides sufficient amount of renewable energy to the Union but usage shortages are very high.

---

[15] Theo Hitiris, **European Union Economics,** 5th edition, (UK: Pearson Education Limited, 2003), p.311.

[16] EU Energy in Figures, Statistical Pocketbook 2014, European Commission, http://ec.europa.eu/energy/sites/ener/files/documents/2014_pocketbook.pdf [10 September 2014].

[17] EU Commission (2014c), Communication from the Commission to the European Parliament and the
Council, European Energy Security Strategy, Brussels, 28.5.2014, COM (2014) 330 final, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0330&from=EN [15 October 2014].

Table 1.1: Production of Primary Energy in EU-28 by 2012[18]

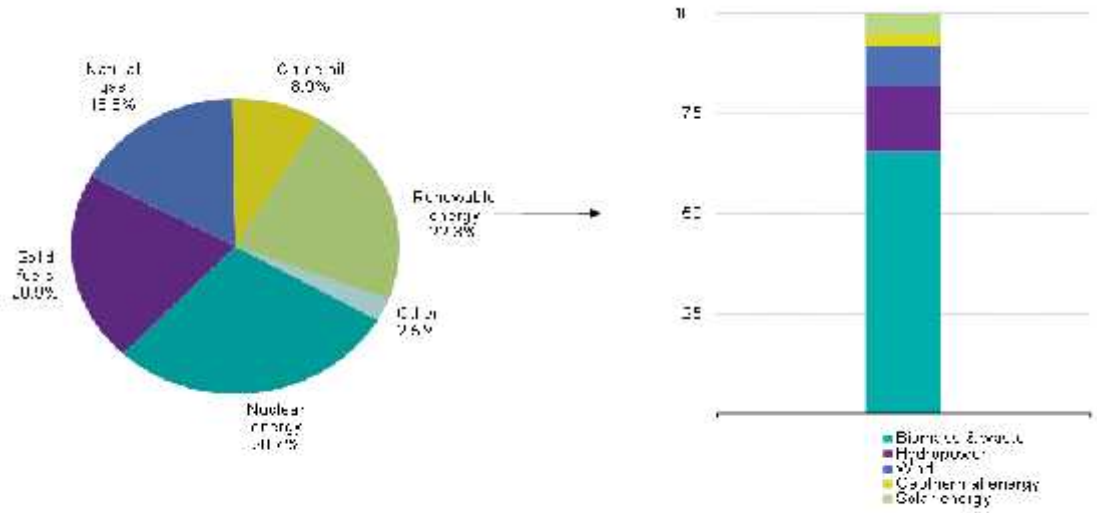


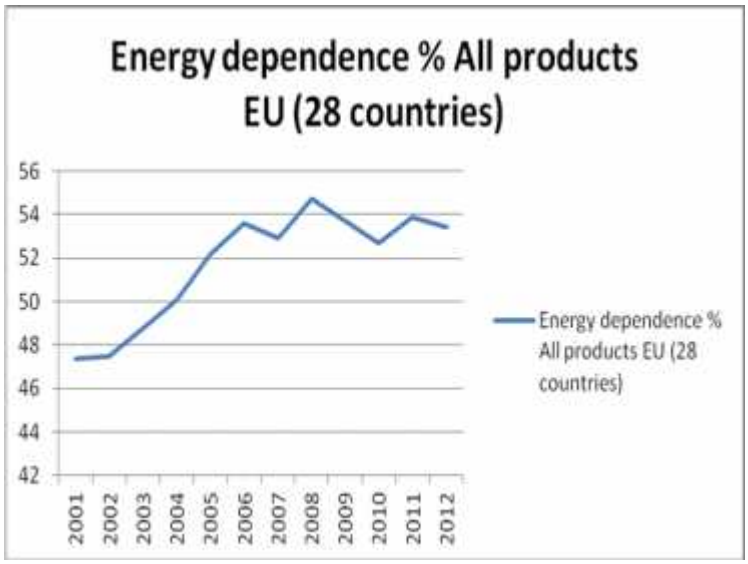
Table 1.1 above indicates the primary energy production in the Union by 2012. Production of Nuclear Energy was 28.7% has the highest portion in the production cake. Environmental concerns and Fukusima[19] nuclear power plant accident that happened after enormous earthquake in Japan had raised security questions to the highest point. The efforts was failed to alter the situation and safety measures couldn't prevent the spread of radiation in Japan. It resulted huge leak of radiation for days and it reaches the Iceland namely Europe. This brings out the safety issues and resulted closures of some power plants in Europe. Yet, nuclear energy represents the highest position in production.

[18] Production of primary energy in EU, **Eurostat**, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Production_of_primary_energy,_EU-28,_2012_(%25_of_total,_based_on_tonnes_of_oil_equivalent)_YB14.png [15 October 2014].

[19] Fukusima nuclear power plant which terribly damaged after huge earthquake in 2011 in Japan. It is one of the world's biggest power plants. After the disaster, it spreaded high level of radiation and it bring upon nuclear safety question.

Renewable energy has the second share in energy production in the EU however it failed to satisfy because of the industrial structure. On the other hand, solid fuel contains coal, wood varieties and grains like corn, wheat that using mostly for heating. Natural gas production is 18.8% which industries and households depends on mostly. Furthermore, crude oil namely production is below 10% which also make EU one of the vast demanding regions in the world.

Table 1.2 EU-28 Energy Dependence [20]



Line chart above shows the evolution of EU dependency of energy between 2001 and 2012 in oil, coal, and natural gas that covers twenty-eight members. In the new millennium, Europe faces ascending energy dependence which was more than 50% in 2012 indicators. Energy import dependency shares are crude oil 90%, natural

[20] Energy dependence of EU, **Eurostat**, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdcc310 [15 September 2014]

gas 66%, solid fuels 42% and nuclear fuel 40%.[21] The important vital factor of issue is the dependency on one main external supplier namely Russia. This is the main force for EU to take a common strategy in energy security.

The EESS summarizes the dependency as follows:

- Six Member States depend from Russia as single external supplier for their entire gas imports and three of them use natural gas for more than a quarter of their total energy needs. In 2013 energy supplies from Russia accounted for 39% of EU natural gas imports or 27% of EU gas consumption; Russia exported 71% of its gas to Europe with the largest volumes to Germany and Italy;
- For electricity, three Member States (Estonia, Latvia and Lithuania) are dependent on one external operator for the operation and balancing of their electricity network.[22]

To be added, EU crude oil and oil product imports costs 300 billion Euros that one third of them from Russia as well. EU energy security is being more important because of these statistics in the context of expected rise in the world energy demand by 27% by 2030.

1.1.1. Crude Oil and Coal

Crude oil is simply oil or American say petrol is the world leading source and it expected to remain in the future. It has lots of varieties which has been using in several industries. The main producers of crude oil are USA with 12, 34 million barrels, Saudi Arabia 11,70 million barrels and Russia 10,76 million barrels per day in the world according to 2013 estimates.[23] EU imports 90% of its crude oil

[21]EU Commission (2014c). Communication from the Commission to the European Parliament and the Council, European Energy Security Strategy, Brussels, 28.5.2014, COM (2014) 330 final.
[22] *Ibid*.
[23] World Oil Production, United States Energy Information Administration, http://www.eia.gov/countries/index.cfm?view=production [12 November 2014]

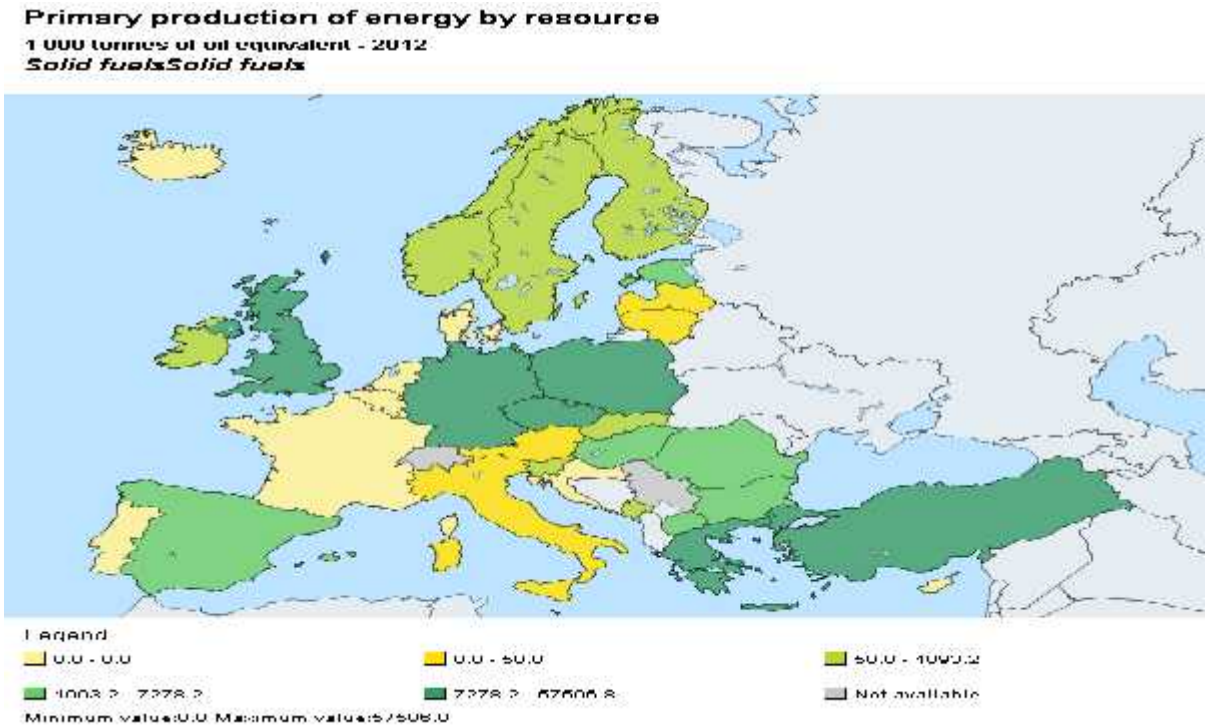
consumption. Russia is the main exporter of EU's crude oil and it refined in the EU. Besides, some of the refineries are structured specifically for Russian crude oil. Current refinery system is sufficient for the demand of the EU's oil products. USA and Russia are the suppliers of gasoline and diesel to the Europe and their interdependence share vary from the stock levels, global oil trade and their transport ability. Refined products mostly use in the transportation. Oil production is only 10% percent which originated from UK and Denmark. The main target is maintaining competitive refining capacity to avoid more interdependence to Russia. European Commission encourages member states to reduce oil use in the transportation to meet the CO_2 emissions targets. However, EU's oil imports are more secure than the natural gas presently because of a functioning global market for oil prices and stocks.

Solid fuels namely the varieties of coal like hard coal, lignite; charcoal etc. coal in general is important source in the world. Yet, coal was the main contributor of the Union history but it has been losing its reputation. Coal production has been decreasing in the EU because of the climate change policies. The characteristic of the solid fuels extract harmful greenhouse gases to the atmosphere. The main producer of coal is China and the main controller of the mine sector in the world. China produces nearly 50% of world production. Updated analysis shows that with the current production levels, there are 138 years of coal and lignite reserves left in the world.[24] Table 1.3 shows the primary production in the EU mainly Europe including candidate members Turkey and non-members like Norway. EU is the fourth largest

[24] European Commission (2011), "The Market for Solid Fuels in the European Union in 2010 and the Outlook for 2011" http://ec.europa.eu/energy/coal/studies/doc/2011_eu_market_solid_fuels_2010.pdf [18 November 2014].

region in terms of coal consumption. Also coal and lignite reserves are 80% of its total amount of fossil fuels.

Table 1.3 Productions of Solid Fuels in Total of EU[25]



Germany and Poland is leading the coal production. Germany has the largest deposits of coal and lignite also high amount of reserves located in Poland, Greece, the Czech Republic, Hungary, and Bulgaria. Solely, Poland has the %75 share in EU total in coal reserves. Internal production covers 60% of its consumption. Coal demand is driven by power sector and electricity. As an example, Poland electricity is generated 88% with coal and lignite in the 2010 indicators.[26] The coal suppliers are Russia and the USA. Until 2006, Russia was the main exporter but Russia shifts to

[25] Production of Solid Fuels in EU, **Eurostat**, http://epp.eurostat.ec.europa.eu/tgm/mapToolClosed.do?tab=map&init=1&plugin=0&language=en&pcode=ten00076&toolbox=legend [1 December 2014].

[26] European Commission (2011), "The Market for Solid Fuels in the European Union in 2010 and the Outlook for 2011" http://ec.europa.eu/energy/coal/studies/doc/2011_eu_market_solid_fuels_2010.pdf [18 November 2014].

the Asian market. Currently, USA and Australia became the main exporters. The Environmental constrains affect use of coal which causes decrease in the production and it will continue to decline in terms of trends in energy dynamics.

1.1.2. Nuclear Energy

Nuclear power is the leading source of EU production. Like coal, nuclear power historically is an important source for Europe. Since the EURATOM Treaty, EU has been using nuclear power as a sustainable source. USA has the highest amount of nuclear power plant in the world however International Energy Agency's World Energy Outlook 2014 report indicates that China will be the number one in nuclear power in the coming years.[27] Energy outlook indicates that Chinese increasing electricity production from nuclear power go beyond the current installed capacity of USA and Russia. In the EU nuclear power generates also for the electricity production mostly. 30% of the electricity produces nuclear energy in total. Currently, there are 132 power plants in the 14 member states in the EU.[28] After the Fukuşima, the security of the nuclear plant has been arguing in the Europe. European Commission put lots of safety measures for new power plant constructions and all the generators passed the safety measures. After these assessments, Germany shut down the eight of their generators. Shortages in the energy production encourages member states more nuclear generator construction but environmental concerns and high-level of safety standards prevent more generators.

---

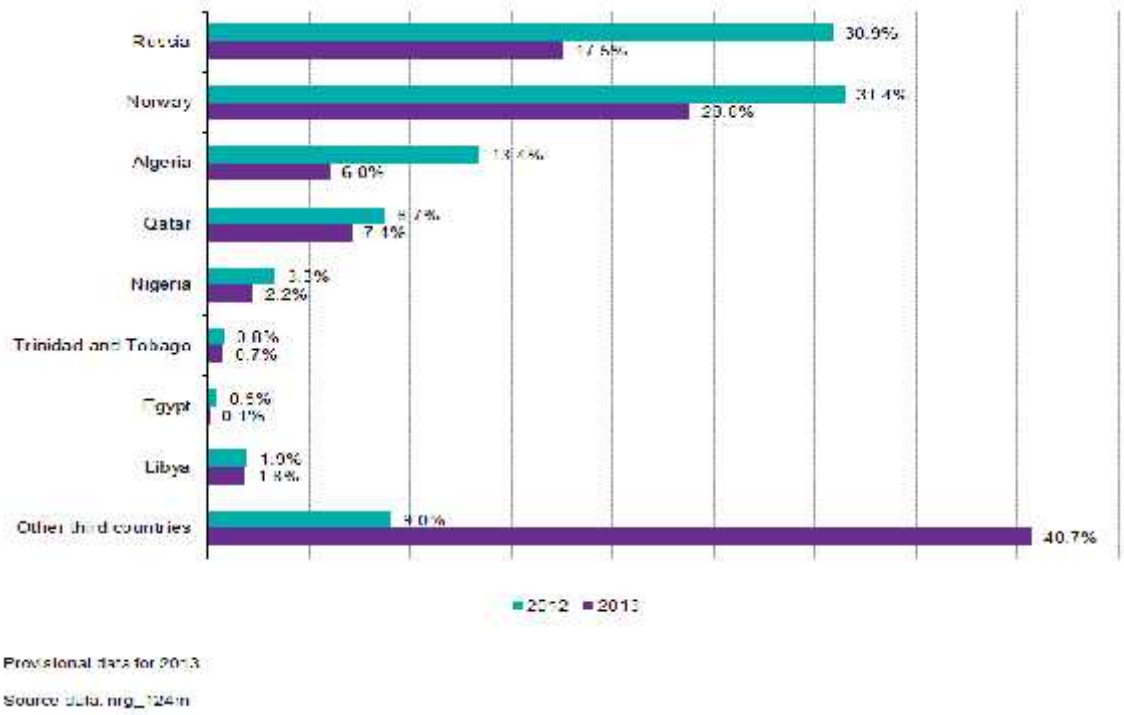
[27] Fatih, Birol, "IEA's World Energy Outlook 2014", **Centre for Strategic and International Studies**, Washington, November 24, 2014.

[28] Nuclear power plants in Europe, European nuclear society, http://www.euronuclear.org/info/encyclopedia/n/nuclear-power-plant-europe.htm [10 November 2014].

1.1.3 Natural Gas

EU industry is depending on natural gas generally. Natural gas is the world leading source after crude oil. EU is one of the net importers of natural gas and its varieties like liquefied natural gas (LNG). The large portion of import is come from Norway (31.4%) secondly Russia (30.9%) and Algeria (13.4%) which is the third supplier of EU by latest statistics in December 2014. Other sources especially LNG comes slightly come from Middle East and North Africa namely Algeria, Tunisia, Qatar and Nigeria but it is decreasing because of the shifts to Asian market that is more profitable.

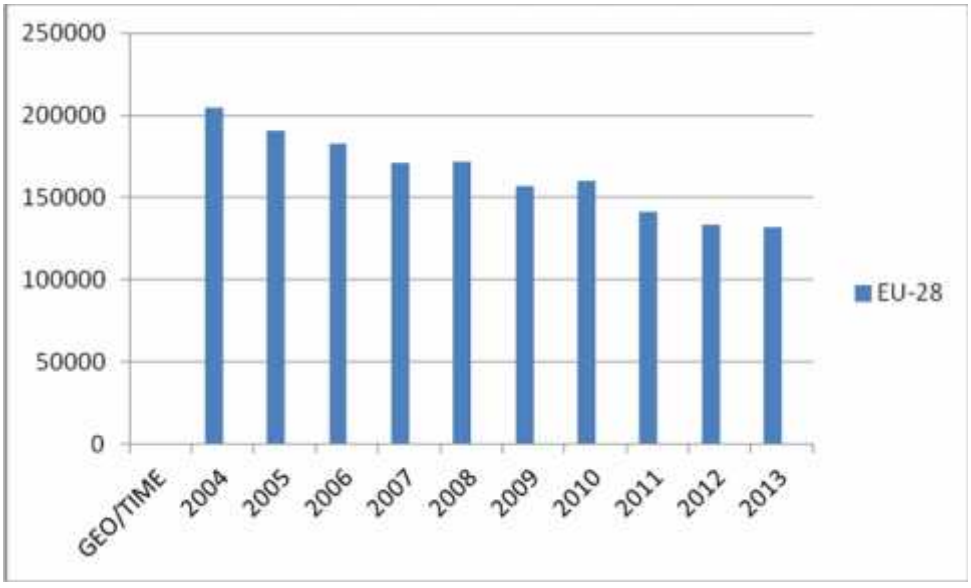
Table 1.4: EU-28 Imports of Natural Gas by Country Origin[29]



[29] Imports of Natural Gas by country origin, **Eurostat**, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:EU-28_imports_of_natural_gas_-_percentage_of_extra-EU_imports_by_country_of_origin.png [14 October 2014].

EU natural gas import ratio is 57% in 2005 and it is estimated that it will raise 70% in 2020 and %84 in 2030.[30] Europe dependencies on natural gas are increasing while its industry converting to gas. The reason is environmentally natural gas involves less CO_2 than coal and oil and economically viable resource. LNG imports have been flashing since the new viable sources discovered in North Africa and USA. Global LNG market has been growing as well with the new suppliers. Liquefaction of natural gas is an expensive investment. However, it is more profitable source after the process. Algeria and Nigeria are main contributors of the LNG imports of EU. Recent researches show that both Norwegian and North African production and unexploited hydrocarbon resources have important potential to increase.

Table 1.5: Total Natural Gas Production of EU-28[31]



[30] European Commission, Green Paper on "An Energy Policy for Europe", {COM(2007) 1 final}.Brussels,2007, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0001&from=EN [17 October 2014].

[31] Primary production of energy by source , Natural Gas, **Eurostat**, http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=ten00076&plugin=1 [15 December 2014].

Natural gas production decreased nearly 50% in last 15 years in the EU. In the beginnings of millennium, production was stable at glance but it diminished steadily because of industrial changes and scarcity of the resources. The main reason was that industries have been converting to the natural gas.

Diversifying the energy supply became the main policy priority in the EU. New pipeline projects had been supported by European Commission. Currently, EU dependency on Russia in natural gas will continue in the next twenty years. East Mediterranean discoveries and Caspian Sea resources mainly Azerbaijani natural gas seems to be the main possible alternative route which will be discussed later.

1.1.4 Renewable Energy

The establishment of new alternative energy ways depending on energy resources in today's industrial advances. Furthermore, increase in populations and development of urbanization *"Renewable energy is a term used to describe a wide range of naturally occurring replenishable energy sources-in particular, sun, wind, water and a range of biomass resources."*[32] Renewable energy (RE) sources can be used in various means. For example; electricity can be produced from wind, water, and geothermal sources. In the world nuclear energy is the leading renewable source. In Europe also nuclear power is most widely- used source after fossil fuels as mentioned above. Wind tribunes, water and sun sourced energy are the most

[32] "Renewable Energies: Success Stories", European Environment Agency, **Official Publications of European Communities**, Environmental issue report no 27, 2001.

widespread sources in the Mediterranean. Wind tribunes transfer the passing air and converted into electricity.

Like the wind tribunes RE has been using for generating electricity in general. Water has a few ways to be used as an alternative way. Hydroelectric power stations produced electricity from inland waters like rivers, tidal energy produced rotationally from earth, moon (from its gravitational pull), and energy from waves from windy off shores. Sun is another substitute for alternative energy and can be produced with photovoltaic cells like giant mirror fields which converted the sunlight into electricity. Also solar thermal energy is used for transferring the sunlight to heat the water or air. For example, most of the households have their solar panel in their roof for heating the water in North Cyprus. Biomass energy produced from animal manure or growing plants for some solid material which can be considered as less attractive way for future energy ambitions.

RE is very significant for integrating the environmental issues with the energy policy. Sustainable energy resources play an important role for economic developments. Countries targeted to decrease greenhouse gases. Energy sector is the main source of this pollution. RE provides cheaper and cleaner energy except biomass which has also bad effect on air.

Kyoto Protocol[33] can be considered as touchstone of RE in 2005. It is a worldwide protocol of UN which targeting to combat climate change by setting

[33] Kyoto Protocol is an international agreement of UN in the framework of Climate Change. The protocol came into force in 2005 and as March, 2015 83 states signed the protocol. It targeted a global action for reducing emissions especially settling a universal reduction targets greenhouse gases.

internationally binding limits of reducing the CO_2 emissions in the atmosphere.[34] National energy policies and interests put a strong wall to these targets, but technologic changes and increase in production of renewable energy sources give a cause for the need of global action. It emphasizes that climate change is a global challenge which requires worldwide action. Signatory states targeted to reduce its emissions differently. All the UN members are the parties of the protocol however only 83 members signed it as from March, 2015. In 10 years after the protocol, some amending of the provisions has been done but still it considered as a weak step for a global action because of fail in gathering all the member states.

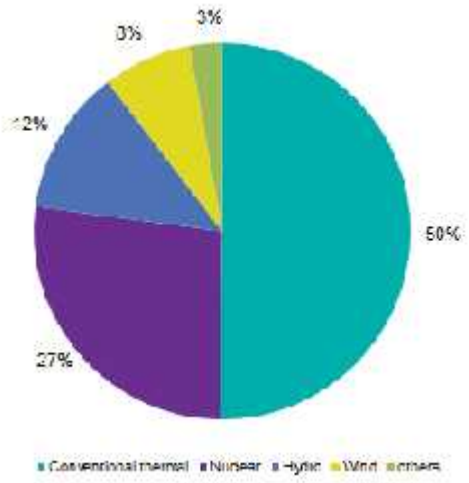
EU is one of the highest polluted blocs in the world in terms of greenhouse gas emissions. EU as a signatory of Kyoto protocol, committed to reduce its greenhouse emissions at least %40 of domestic reduction by 2030 in the framework of climate and energy policy. In the latest European Council conclusions on October 2014, member states decided to move down the emission levels by pushing to pursue the national targets.[35] They agreed on historic climate goals but coal- depended members in industrial framework like Poland put a strong set back to these decisions. Poland granted some privileged concessions and funds for modernizing its coal-based power plants due to 2019. This was seen as the first joint step of EU leaders for the climate change.

In the last decade, production of energy in EU has been decreasing however renewable energy production is in escalation. This excess of production rate in RE

[34] Kyoto Protocol, United Nations Framework of Climate Change, http://unfccc.int/kyoto_protocol/items/2830.php [25 August 2014].
[35] European Council Conclusions, European Council, October 24, 2014. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145397.pdf [1 November 2014].

may change by using more and more renewable energy. In 2012, renewable energy consumption was 14.1% of EU total consumption. European council targets at least 27% share for renewable by 2030.[36] This binding decision encourages the member states collectively in the line of internal energy market. As it is explained before, EU is the only actor in the world that produces half of its electricity by renewable energy. Electricity is the main sector where renewable energy is using mostly. Table 1.6 shows the contribution of different alternative sources to the total electricity production. [37]

Table 1.6: EU-28 Electricity Production by Source, 2013



Solar energy is also another renewable energy trend in the world also in the EU. As an example Germany produced half of its electricity by solar power in

[36]*Ibid.*
[37]Electricity Production by Source, **Eurostat,** 2013, http://ec.europa.eu/eurostat/statistics-explained/index.php/File:EU-28_Electricity_production_by_source,_2013_(in%25).png [25 July 2014].

2013.[38] EU electricity grids have been uniting in the European continent which is another framework of the EU internal energy union. Currently, 34 European states are interconnected their electricity grids in Europe. The renewable energy is a key element to uniting the systems. Consideration of renewable capacity in the regions and also it requires new storage solutions. Non-member European countries are also a part of the electricity system of EU which is trying to continue to growing. Mediterranean region is important for solar power generation. Under the EMP energy projects has been constructing to unite the Mediterranean neighbors to the European systems via France, Italy, Spain from Algeria, Morocco, Libya.

Renewable energy is number one choice of the EU and it seems to remain the same in recent years because of the climate change. Still there are some concerns of sustainability and the cost of the renewable production. The new technologies triggers new sources like onshore wind power which ensure the competitiveness that gave cause for cost reduction. 2030 renewable targets of EU encourage more cost-effective successes and aids for environmentally free productions.

2-European Policies towards the Mediterranean

Since the European integration began, concentration on Mediterranean area founded when Euro-Arab dialogue initiated in 1970s. The main reason of this dialogue was stabling the relations with the region especially after the Arab-Israeli war in 1973 which oil producing Arab countries put an embargo for those who

[38]"UK and Germany Break Solar Power Records", **The Guardian**, June 23, 2014. http://www.theguardian.com/environment/2014/jun/23/uk-and-germany-break-solar-power-records.[20 November 2014].

claimed to support Israel. The first mention of introducing a common Mediterranean policy toward region was originated in the early 1970 in Europe where Cold War policies sustained. Before 1960s, there is no particular Mediterranean policy for the Community. Economic relations with the region held under the third world economic instruments. However, association agreements with Spain, Greece and Turkey had different nature which aimed for membership. This shows lack of coordination in regional policy. During the Italy presidency in 1971, it stressed that it is needed to have strong relations and working groups for the area has established. Successively, European Commission developed its relations with Algeria, Tunisia and Morocco which is the first bloc in the regional cooperation before Mediterranean at glance. The first official mention of "Mediterranean" for EEC is in 1972 which European Council decided to stress the importance of the region geographically and politically as "Mediterranean".[39] European Council adopted "Global Mediterranean Policy" which presented technical and also financial cooperation rather than economical until 1992. This was also ineffective to ensure sustained relations with the region. Panabianco argued that this policy failed because of the economical problems after 1973 oil crises and post-colonial logic in the Mediterranean policy which established an export-led trade.[40] In the coming years, foreign relations of the community developed like the Euro-Arab dialogue initiate. The Mediterranean member states and the Arab League members introduce Euro-Arab dialogue for Middle East conflict. In addition, economic relations had increased gradually leading by Algeria, Tunusia, Morocco bloc in the 1980s. In the case of Euro-Arab dialogue, trade was

[39] Federica Bicchi, **European Foreign Policy Relations toward the Mediterranean**, (New York: Palgrave Macmillan, 2007), p. 97.
[40] Stefania Panabianco, **New Euro-Mediterranean Cultural Identity**, (UK: Routledge, 2003), p. 5.

merged between the European customers and Arab suppliers which enabled political obstacles.

Enlargement of Greece, Spain and Portugal in 1980s enhance the relations with the region. Xenakis and Chrssochoou argued that Mediterranean has always played crucial geostrategic and geopolitical role for European peace and security through being natural bridge connecting the three continents; Europe, Asia and Africa.[41] In addition to this, such geostrategic position and its mixture of cultures and civilizations have made the relations also solid. Mediterranean countries of the Community put an effort to create a new initiative in a specific region not independently but commonly, preferable but the beginnings of the negotiations was hesitant and self-interest oriented. The early interests of European Council with the Mediterranean first mentioned in the post-colonial French policies to preserve its relations with North Africa. European Council has been launching various policies separately "cooperation agreements" with Maghreb (Algeria, Libya, Tunisia, Morocco, and Mauritania) and Mashreq (Egypt, Lebanon, Palestine, Jordan, Syria) countries respectively. Table 10.1 shows trading agreements between EEC and the Mediterranean countries in early 1960s where EEC had differentiated ties with the region. The reasons of that, the prior issues of the EEC were the internal and external interests that are the completion of the single market program which was given occasion to intercourses with European Free Trade Area (EFTA) countries for the formation of customs union and involvement of the Iberian nations (Spain and Portugal) to the community. As a result, this was consisted two different types of

[41] Dimitris K, Xenakis, Dimitris and N. Chrtssochoou. **Europe in Change; The emerging Euro-Mediterranean System,** (UK: Manchester University Press: 2001), p.17.

relations namely closer economic connections with expected members like Cyprus, Malta and Turkey and wider framework with the rest of coastal states in the region.

Table 1. 2: The Development of Trading Agreements between the EEC/EC and the Mediterranean Countries

Association Under Article 238		Co-operation Agreements		Preferential Trede Agreements		Non-preferential Trade Agreements	
Greece	1961	Israel	1975	Spain	1970	Israel	1964
Turkey	1963	Maghreb:	1976	Israel	1970	Lebanon	1965
Morocco	1969	(Algeria, Morocco, Tunisia)		Egypt	1972	Yugoslavia	1970
Tunisia	1969	Mashreq:	1977	Lebanon	1972	Yugoslavia	1973
Algeria	1970	(Egypt, Lebanon, Jordan, Syria)		Portugal	1972		
Cyprus	1972	Yugoslavia	1980				

*years refer to date of signature of agreements not their implemantation.
*Source: General Reports on the Activities of EEC/EC[42]

Before Iberian countries and Greece joining the EEC, association and preferential trade agreements had initiated towards the region. Morocco, Tunisia and Algeria which are the important partners in Mediterranean had increased continuously their relations with community after the first interactions in late 1960s. The early attitude of EEC toward the non-member Mediterranean countries was ambivalent but additionally responsive.

In the late 1980s, the Community's external relations formulated reciprocal agreements because Mediterranean countries did not have strong enough domestic markets to open up. During the Mediterranean extension that includes Greece (1981), Spain and Portugal (1986) created more activism in interrelated policies between the

[42] Kevin Featherstone, **the Mediterranean Challenge: Cohesion and external preferences,** In: Lodge, Juliet, (ed.) **The European Community and the Challenge of the Future**, (UK: Pinter, 1989), pp. 186-201.

European and African shores which became more serious. Because of that enlargement, Maghreb showed a great enthusiasm about renovating the relations with the EEC. Thus, Morocco applied to join the Community in 1987.[43]

In the beginnings of the 1990s, external and internal changes affected the relations with the region. The end of the Cold War namely was the end of the geostrategic rivalry and also developments of the free market economies renovated the cooperation. Ratification of Maastricht Treaty which turned EEC a Union gives a political character to the community and establishes a common foreign and security policy which also affected the relations. *"In 1990, New Mediterranean Policy had been adopted in Council with an increase in the financial contribution for the period 1992-1996 that 4.405 million ECU, which practically tripled with respect to the previous one (1987/91)"*.[44] New Mediterranean Policy is condemned because European Investment Bank (EIB) gave weighty loans as financial aid packages while in loss. Thus, it had an important and noticeable role in the new period of Euro-Mediterranean relations by adding the respect of human rights and by advancing the historic cooperation in the Mediterranean area.

EEC form political objectives where start to seek political leadership or dialogues with the world. After the Maastricht Treaty, EU opens a political phase for the Union. Involving the Middle-East process and the Cyprus question are the examples for alteration of relations and also widen the conventional interaction with

[43] Dimitris K, Xenakis and Dimitris N. Chrtssochoou, **Europe in Change; The emerging Euro-Mediterranean System,** (UK: Manchester University Press, 2001), p.58.
[44] Ester Barbe and Ferran Izquierdo, **Present and Future of Joint Actions for the Mediterranean Region,** Martin Holland (ed), Common Foreign & Security Policy; the record of reforms, (London: Pinter, 1997), p. 123.

the region. After the Global Mediterranean Policy framework, EU sustained a renovated Mediterranean policy during the early 1990s which involved active external actions. European Council adopted a decision that forms joint action in Middle East process in 1994 in the framework of Common Foreign and Security Policy pillar.[45] This is a milestone for the regional policies of the Union as a common action. Also, this opened a way to deepen the Mediterranean relations in common and latterly leaded to Euro-Mediterranean Partnership. The earlier European approaches namely Post-1995, Euro-Mediterranean relations based on both long-term multilateral and exchange political dialogue and also based on progressive European norms as respect for diversity and pluralism in politics. Mediterranean region which was one of the strong zones of area of the Union became the first collective external action Therefore, EMP could be considered as the first joint action toward the region.

2.2 Euro-Mediterranean Partnership and Union for Mediterranean

Bilateral relations had shaped the EU policy toward Mediterranean which is dominated by France. After the complex regional policy framework, EU established a EMP with its southern neighbors. Euro-Mediterranean Conference held in Barcelona in 1995 which was concluded with EMP. This also referred as Barcelona Process. Twelve Mediterranean partners including Maghreb and Mashreq, Turkey, Malta, Cyprus, Israel and EU member states establish a partnership. The parties;

---

[45] European Council conclusion on Middle East Peace Process, Official Journal of European Communities, 1994, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31994D0276&qid=1419254980889&from=EN [15 November 2014].

> "…agreed to establish a comprehensive partnership among the participants-the Euro-Mediterranean partnership-through strengthened political dialogue on a regular basis, the development of economic and financial cooperation and greater emphasis on the social, cultural and human dimension, these being the three aspects of the Euro Mediterranean partnership."[46]

EU intended to have a shared or common policy toward region especially on economic cooperation's and deepening the political dialogue with the region. Cultural, social and human dimension mostly pushed back because of the ethnic mosaic of the region. Mediterranean sphere as an important policy area turned out the first framework of the Union that adopted regionally. First pillar namely Political and Security Partnership involve raising the stability in the region and politically shared collaboration on human rights and rule of law. This pillar introduced mainly because of the Copenhagen Criteria's of EU which are political provisions of EU membership ratified in 1995. Copenhagen Criteria requires politically stable, functioning rule of law, human rights and minority rights, sustainable market economy and acceptance of *acquis* of EU. This pillar also peaked after the policies in the early 2000s by USA toward "Broader Middle East and North Africa" initiative in the G-8 meeting. It is supervened by the uprisings in the Arab world called "Arab Spring". Barbe and Izquerdo argued that political and security side collapsed because of Middle East conflict and disagreement in the migration control and creating the Euro-Mediterranean free trade area.[47]

---

[46] Barcelona Declaration adopted at the Euro-Mediterranean Conference, Barcelona, 1995, p. 5, http://ec.europa.eu/research/iscp/pdf/policy/barcelona_declaration.pdf [10 October 2014].

[47] Ester Barbe and Ferran Izquierdo, **Present and Future of Joint Actions for the Mediterranean Region,** Martin Holland (ed), Common Foreign & Security Policy; the record of reforms, (London: Pinter, 1997), p. 132.

Energy cooperation with the region continued in another path in a differentiated approach. It is continued with *ad hoc* committee meetings and forums. First high-level energy conferences held in Tunisia, Athens and Madrid in 1995.[48] They had vital importance that it stimulates the Mediterranean countries to the Treaty on the European Energy Charter.[49] This charter is one of the key charters that start to regulate energy industry. There were hesitations from Turkey as a candidate country. Turkey In addition, it involved the appropriate conditions of investors. The future cooperation will rely on energy efficiency, energy trade; transportation exploration, development of networks and also development of renewable sources of energy.

In 2003, Euro-Mediterranean Energy Partnership Ministerial Conference held in Athens. They agreed on a declaration of intent on the establishment of the Rome Euro-Mediterranean Energy Platform (REMEP).[50] At the end of the REMEP, with the respect of the objectives that defined in Barcelona Conference-November 1995, the main cases that they agreed on as; they declared their progressing interest in Euro-Mediterranean energy policy configuration. The Energy Ministers of the Union declared the important role of the Euro-Mediterranean Energy Partnership (EMEP) on the EMP and its contribution to economic and social growth. Also, they associated the Euro Mediterranean Partnership with its objectives such as the protection of environment, security competitiveness and transparency of markets supply.

---

[48] Hans Günter, Brauch, Antonio, Marquina and Abdelwahab Biad**, Euro-Mediterranean Partnership for the 21st century**, (New York: Palgrave, 2000), p. 366.

[49] Energy Charter Treaty is a framework for international cooperation of European states and other developed countries. The main aim was increasing energy potential of central and Eastern European countries to upgrade energy security supply of EU.

[50]"Declaration of Intent", REMEP, Rome, 2004, http://ec.europa.eu/dgs/energy_transport/international/regional/euromed/energy/doc/statuto_remep_en.pdf. [12 October 2014].

They claimed that, the area's nature and its energy policy activities and the performance of the root projects of common interest should be defined clearly. Then these issues must be linked to the progressive establishment of a new Euro-Mediterranean energy policy that is added fully to the free trade area. It is determined that in order to clarify the Mediterranean electricity and natural gas links, the gradual performance of the new interrelation network projects and the strengthen of existing interrelations must be aimed in limited time.

It is defined essential by the Ministers, for the profitability of this target, that enhancing the cooperation of establishing mechanism based on the Euro–Mediterranean Energy Forum priorities of 2003-2006, which are; *"The priorities that are adopted from Athens depend on strengthen the partnership at financial, industrial, political, governmental, bureaucratic and scientific achievements"*.[51]

Euro-Med partnership re-launched as UfM which deepens the relations in the Paris Summit, 2008. UfM is consist of 28 member states of EU and Albania, Algeria, Bosnia and Herzegovina, Egypt, Israel, Jordan, Lebanon, Mauritania, Monaco, Montenegro, Morocco, Palestine, Tunisia and Turkey. Syria is also a member of UfM but it is a suspended issue because of internal political problems. In the same year of Marseille Summit, UfM gave Arab League an observer status which also seen as a positive contribution to political and security framework. Libya also gained an observer status in 2013. However Libya, has been seeking for full membership. UfM established an autonomous secretariat to coordinate funding and projects.

[51] *Ibid.*

UfM is mostly led by France which introduced more concrete and visible actions toward the region. This idea is one of the main elements of the second term presidency propaganda of the former French president Nicolas Sarkozy.[52] It is succeeded to renovate a new enhance political, cultural and economical cooperation. EMP failed mostly because of lack of determined policies of EU and unwillingness of Mediterranean countries. Yet, UfM has been launching efficient projects in the region.

2.3 Mediterranean Projects on Energy

Regional cooperation has been improving with many innovative, economical and social projects under the European Neighborhood Policy (ENP) or accurately EMP. Among the other neighborhood, Mediterranean region flashes with its "win-win" potential in terms of renewable resources. Alongside the intergovernmental agreements between the sides, joint venture projects that have been initiated especially after UfM established which gives a new momentum for Euro-Mediterranean relations. The ambition was to intensify the relations with partner countries and to extend the area of cooperation. Both ENP and EMP, underlines the importance of strategic alliance though energy and projects thought energy succeeded increasingly which assisted economical improvement as well. The main projects are Mediterranean Solar Plan (MSP), Mediterranean Energy Ring

[52] "Sarkozy sounds out basis for Mediterranean Union", **Euractiv**, July 16, 2007. http://www.euractiv.com/energy/sarkozy-sounds-basis-mediterranean-union/article-165541 [25 November 2014]

(MEDRING), Mediterranean Science, Policy, Research Innovation Gateway (MED-SPRING) and Euro-Arab Mashreq Gas Market Project (EAMGM).

Firstly, MED-RING project aims build up interconnected electricity systems between the EU and Mediterranean area. The project began in 2013. MED-RING project involves 22 countries with all coastal states in the region. The interconnectors are France, Spain, Italy, Greece, Portugal, Former Yugoslav Republic of Macedonia (FYRM), Turkey, Morocco, Algeria, Tunisia, Libya, Egypt, Jordan. This project called European super grids that aiming creates a kind of circle around the Mediterranean Sea by connecting national electricity networks. After the project initiated, EU connecting the electricity grids with joining of Middle Eastern and North African regions shows economical benefits for all interconnectors.

The second important project is (MSP) which is core project after MED-RING that introduced in 2008 to 2020. In addition, MSP is flagship of the projects toward Mediterranean region because of the huge solar potential. European Commission initiated this project under the framework of UfM in 2008.[53] This project became much more important after the implementation of EU Renewable Energy Directive 2009/28/EC. This directive imposes national targets for renewable resources and especially in Article 39, it is stressed that member states should take into account their national targets until projects like MSP are fully interconnected to the Union[54] MSP has two main goals that to be produced 20 GW[55]more renewable

[53] Mediterranean Solar Plan, Union for Mediterranean Secretariat, http://ufmsecretariat.org/mediterranean-solar-plan/ [25 July 2014].

[54] Directive of Promotion of use of renewable energy, Official Journal of European Union, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=en [27 July 2014].

energy and saved considerable amount of energy by 2020. This is very important in terms of both sides. From the Mediterranean perspective, energy demand is increasing 5%-10% per year which increases energy dependency in very resource-rich territories. Infrastructural framework established with the joint work by Spain and Italy and feasibility studies for connections done with local partners. MSP compliments the other projects but also other sub-projects was done to assist MSP. "Paving The Way for Mediterranean Solar Plan" was a project that aimed to assist MSP in local infrastructures and operations of sustainable energy systems between 2010 and 2013.[56] The result report of this assistance shows deficiencies and put some recommendations. These are *"There should be parallel promotion of reform within national politics, there needs to be a parallel process of industrial restructuring, the political context needs to be conducive to regional cooperation, there should be prospects for Trans-Mediterranean electricity transfers."*[57] Transaction routes has been determining as Western Path I&II covering Morocco and Algeria though Spain, Central Path I&II covering Algeria, Tunisia, Libya though Italy and Eastern path I&II covering Jordan, Egypt, Syria thought Turkey furthermore Greece, Bulgaria Romania with European Network of Transmission System of Operations for Electricity (ENTSOE) by 2016-2020.

The third important project is MED-SPRING which is set up in the Euro-Mediterranean Partnership Council in 2012 that aims easy access to affordable energy, high quality of foods and targets to engage the governmental institutions for

---

[55] GW is a unit of measurement of electricity namely gigawats.
[56] Paving the way for the Mediterranean Solar Plan, http://www.pavingtheway-msp.eu/index.php?mylang=english [27 July2014].
[57] Paving the way for the Mediterranean Solar Plan, Final Report, 2010, http://www.pavingtheway-msp.com/0-PWMSP-Final-Report-March-2011.pdf [27 July 2014].

good dialogue. This project is mainly on sociological challenges but this project is important to alter these problems to cooperation. MED-SPRING gathers an expert group in order to work with the project in innovation and provides sustainability in the region.

EAMGM project is launching in the mid 2000s that aimed the boost up the regional integration of gas market by harmonization of legislations and regulations of the project partner countries.[58] The parties of the project are Egypt, Iraq Jordan, Lebanon, Syria and Turkey. First phase is between the years 2005-2009, Iraq and Turkey were the observers of the project. In 2010, second phase (EAMGM II) launched which Iraq participated as partner country. The projects intended to expand the regional main gas pipeline Arab Gas Pipeline and also additional energy networks. The final aim of the project was integrating the EU gas market with the region. At present, second phase of the project was ended in 2013 and completely came to an end for "Arab Spring".

3- Endogenous and Exogenous Actors in the Mediterranean Regional Energy Policy

In the determination of regional policies internal and external actors played an important role. Policy actors IGOs or international organizations have their impact on the policy determination. On the other hand, in the case of Mediterranean it has its

[58] Euro-Arab Masreq Gas Market Project, EU Neighbourhood Info http://www.enpi-info.eu/mainmed.php?id=302&id_type=10 [20 November 2014]

own endogenous dynamics that shape energy policy. External actors are mainly EU, USA and Russia.

3.1 Exogenous Actors

Firstly, EU and Mediterranean has a strong neighborly relationship especially economically. Their cooperation has been going very closely. The relationship cycle shift to colonial links to intimate cooperation. As of March 2015, together with North Africa, Mediterranean region covers 8.6% total trade of EU[59] One of the priorities of the EMP was creating a Mediterranean Free Trade Area and it has been continuing to develop the process. Turkey is in the customs union of EU as an exception in the region. The other area which EU seeks to develop is energy in the region. Energy supply capacity and also sustainable resources of region are the main reasons of EU political shift to the region.

In the political framework, EU concentration on Mediterranean is more precisely because of energy interests and economic interdependence. EU's capability as an actor has been considering as soft power from the militarist perspective but it has huge impact on global economy and energy structures. In the framework of EMP, material reasons like socio-cultural engagement and promoting democratic reforms remained weak. The breakdown of the political cohesion was mass migration to Europe in the 1980s. EU external relations toward region were mainly held by intergovernmentalist perspective. EU as a strong neighborhood has its power

[59] Euro Mediterranean Partnership, http://ec.europa.eu/trade/policy/countries-and-regions/regions/euro-mediterranean-partnership/ [15 November 2014]

on the area but different member states had different relations and interests in the region which North-South Mediterranean separation was obvious. Sub-regions such as Maghreb mainly Algeria and Tunisia were the core of cooperation which was discussed to engage differently. Historical relations which mentioned above still has been continuing to differentiate bilaterally and also at the supranational level. As an example, Morocco intent to advance its status which aimed to deepens the economic cooperation by adopting the *acquis commonautarie* namely EU law. This intention illustrates the strong will of Moroccan engagement to EU market on energy. The other example of differentiation of energy is that Algerian government proposed strategic partnership like Russian apart from EMP in 2008 which ended up with a "Road Map" for association agreement in the same year.[60] Under the road map, European Commission introduces five main policy areas for aiming strategic partnership; economic reforms, energy, trade matters, mobility and fight against terrorism. Synchronization of EU and Algerian energy market is one of the essentials of the road map and also EU support of Maghreb energy cooperation and evolution of some natural gas pipeline projects like Trans-Saharan pipeline were included. To be added, Euro-Mediterranean energy corridor in electricity and also new planned natural gas routes affects the role of EU in the region in the paradigm of energy supply security. The renewable energy game in the region is more common in the regional partnership. EU is the main policy maker in the area and it is likely to continue as a economical power with the insufficient power resources.

[60] Gonzalo Escribano**, "**Convergence toward Mediterranean: The Case of Mediterranean Energy Corridor" **Mediterranean Affairs**, vol. 15, no. 2, (2010), p. 221.

USA is the main actor in global and regional energy policies. The Mediterranean area has evaluated under the framework of Broader Middle-East and North Africa Initiative by USA which proposed in G8 summit in 2004.[61] After the 9/11 attacks, USA changed the policy of supporting the undemocratic regimes to assist democratical and political reforms in the region. It was an important policy changing which also affected energy security in the region. Also, Israel as the strategic partner of the States is the core of the regional policy. As well as security concerns, energy is the priority of States strategy in the area. Increasing the energy efficiency in the region mainly in Israel became the reason of states interests. USA priority is securing the east-med gas for reducing the Israeli energy vulnerability. Furthermore, foreign investments in the region's main natural gas drillings owned by American based company Noble Energy is another reason for the American involvement. In the light of securing the area, Vice-president of USA, Joe Biden, has visited Cyprus in May, 2014 for booting up the Cypriot negotiations but also for assessing the supply potential in the area.[62] It was an important visit because it was the highest level of US official in the island after fifty years. The other policy concern of the states is the energy supply security of Europe. Simply, US interested in economically strong Europe which is depending on the reducing Russian dependency of European countries by diversifying the sources.

Russia is one of the world leading oil and natural gas exporters which also aimed to dominate the market. Russia is the main energy supplier of Europe and it is

[61] Baskın Oran, **Turkish Foreign Policy- Facts and Analyses with Documents, (**Utah: Utah University Press, 2010), p. 267.
[62] "Biden Visits Cyprus as Gas Fuels Reunification Talks", Bloomberg, May 21, 2014. http://www.bloomberg.com/news/articles/2014-05-20/biden-visits-cyprus-as-gas-fuels-reunification-talks [15 January 2015]

likely to remain the same for the near future. Russia wants to dominate the regional gas market to avoid any competitor. As the world main gas supplier, Russia looks for incentives in the region especially in exporting of LNG. A dominant position in the area would also allow Russia an advantageous role especially exporting the LNG to the Asian market where the prices are more profitable. Last Ukraine energy crises in 2014, revealed the diversification need of Europe. New preferences of EU like Azerbaijani origin Southern Gas Corridor also threaten the Russian position. Russia answers the European countries with the China gas deal in May, 2014 which covers 30 year of gas supply to China.[63] Basically, Russia sold its natural gas more profitable way. However, Cancel of South Stream in December, 2014 was surprise for Europe. Russian president Putin announces the new route called Turkish Stream under the Black sea which derails the European market.

As a result, Russian interests in the Mediterranean area are still protecting the current dominant position. Russia has established close ties with key Eastern Mediterranean countries like Israel, Cyprus and Syria. For example, Russian state-owned energy company Gazprom announces the interest of Tamar field of Israel in 2013.[64] Russian companies also interested in regional energy infrastructures building to gain more dominance. As a consequence, Russia signed a deal with Syria and became the closest ally while Europe and the USA terminated political relations because of the domestic political problems. In December 2013, Russian deal with Egypt that allowing the Soyuzneftegaz group of companies that controlled by

[63] Zachary Keck, China and Russia Sign Massive Natural Gas Deal, **The Diplomat**, May 21, 2014. http://thediplomat.com/2014/05/china-and-russia-sign-massive-natural-gas-deal/ [16 January 2015].
[64] "Gazprom seeks to export all LNG from Israeli Tamar Project", Bloomberg, February 26, 2013. http://www.bloomberg.com/news/articles/2013-02-26/gazprom-holds-talks-to-export-all-lng-from-israeli-tamar-project [28 January 2015].

Russian Central Bank control of 850-square mile area of Syrian EEZ.[65] Russia has also the only naval base in the Syria which also increases strategic importance of the region for Russia.[66] Political problems prevented further productions but Russia has a strong foot in the East market after the deal. The other important agreement is Egyptian-Russian agreement on 10th February, 2015.[67] Russia agreed on cooperation in economy but most importantly in energy. Even though, Egypt may join the Eurasian Economic Union.[68] Russian president himself visited the Egyptian capital Cairo and announced new nuclear power plant construction in Egypt. Furthermore, Putin stressed that a new nuclear power industry would be generate in Egypt. Thus, Russia footsteps in the East Mediterranean have been increasing in the light of these developments.

3.2 Endogenous Actors

Mediterranean area, North Africa through Middle-East is having fragile characteristics those changes rapidly. Syria as the heart of the East-Mediterranean lost its power domestically and as of March 2015, it is still unstable. Energy market of the country developed in the mid 1980s. Syrian civil war between the government forces of President Beshar al-Assad and the opposition forces has been clashed since the Arab Spring. Western world had stopped the relations with Assad but Russian

[65] Simon Anderson, **Russia- Syria Offshore Gas Deal Injects New Factor Into Peace Talks,** Washington Institute, 27 December 2013.
[66] Andrulla Kaminara, "Energy and security in the East Mediterranean: How energy will play an increasingly important role in the security of the East Mediterranean", **South East European Studies at Oxford**, March, 2014.
[67] "Egypt, Russia sign cooperation agreements", **Natural Gas Europe**, February 10, 2015. http://www.naturalgaseurope.com/egypt-russia-sign-cooperation-agreements [15 February 2015].
[68] Eurasian Economic Union is the economic union of the Northern Asia. The members are Russia, Armenia, Kazakhstan, Belarus and Kyrgyzstan.

support kept him in the power. Russia prevented any move about Syria. The main reason was Europe was aiming reduce Strait of Hurmuz energy flow by bring creating a new route from Syria. US mainly wanted to decrease Iranian effect on the world leading energy route which rejected by Assad. Adding to this, Syria has the largest proved natural gas and oil reserves in Eastern Mediterranean.[69] Present endogenous civil war especially reveals of ISIS[70] had changed the energy future of the country. This also affects the energy market of the country which nearly comes to end especially terrorist groups owns some of the oil fields in Syria. Even though, ISIS has been smuggling oil and sells it which is the major finance source of the terrorist group.[71] This major threat affects the political stability of Syria but also of the region which triggers the regional energy balance severely.

Egypt is another story of domestic corruptions and also external interferences. The recent Al-Jazeera Egypt documentary with the proved documents confirms the domestic corruption of how Egypt story is changed 90 degree from leading exporter to vulnerable to external resources.[72] Documentary claimed Israel secret service agency Mossad was involved the process of collapsing the Egyptian energy system. Egypt was the leading gas exporter and producer back then. Even though, the documentary claimed the secret dealings of Arab states on energy cooperation with Israel even from the 1990s from Oslo Accords. It is changed when the Arab sovereignty supporter's Muslim Brotherhood came to the power after "Arab Spring".

---

[69] U.S. Energy Information Administration, Eastern Mediterranean Region. http://www.eia.gov/countries/regions-topics.cfm?fips=EM. [24 December 2014].

[70] Islamic State of Iraq and Syria (ISIS) is a terrorist group that aimed to create an Islamic state that covers Syria and Iraq.

[71] How Islamic State uses Syria's oil to fuel its advance, **Reuters**, September 18, 2014. http://www.reuters.com/article/2014/09/18/us-syria-oil-idUSKBN0HD20J20140918 , [1 February 2015].

[72] "Egypt's Energy Crises", **Al-Jazeera**, June 9, 2014. http://www.aljazeera.com/video/middleeast/2014/06/egypt-energy-crisis-201469105429829911.html [20 October 2014].

They stopped the gas export to Israel for political reasons. However, fragile Middle East policy also effect military coup occurred by Fatah El-Sisi in 2013 in Egypt. Energy policy of the country changed again toward more activeness. Regional cooperation agreements with Cyprus, Greece and lastly Russian back up in energy secure the potential of the Egypt.

Lebanon has also been shaking with the political problems that affect the hydrocarbon development badly. They have EEZ clash with the Israel but the other blocks currently in the process of licensing which political turmoil delayed the tenders third time. Foreign investors meaning some important companies have shown interests to drilling in the Lebanese EEZ but currently Lebanese gas industry is mostly depending on the recent developments in the region. Expectations are very low but regional potential would allow Lebanon to enter.

CHAPTER II: ENERGY GEOPOLITICS

1-ENERGY GEOPOLITICS AND MEDITERRANEAN

1.1. Concept of Geopolitics and Energy

Historically, natural resources have always been one of the key elements for policy making like water in early ages or oil in the 19th century. Concept of geopolitics is based on foreign policy-making according to geographic variables like size, population, climate, natural resources. Linguistically, "geopolitics" known as geographic patterns on politics but it has changed after some different contents. Importance of having an advantageous geopolitical position for a country has always been core of the international relations and it seems even that the means of geopolitics may transform except its eminence. In the last century, approach of geopolitics came out more complicated and started to change according to strategic energy resources.[73] Davison argued that there is no such place called "Middle East" geographically nevertheless it exists politically which has vital importance for American politics.[74] Region is controlled by United Kingdom until the First World War and the Middle East name came from an English garrison.

Geopolitical theories have been producing especially since the early 20th century. Main aim of the theories is detect the core states those are in strategic centre of the gravity of the globe and those would dominate the world.[75] The first prominent theory was Mackinder. He argued that Asia, Africa and Europe compose an island which is vital strategic centre of the world. However, according to Mackinder Asia

[73] Cenk Sevim, **Küresel Enerji Stratejileri ve Jeopolitik**, (Ankara: Seçkin Yayıncılık, 2012), p. 107.
[74] Roderic, H Davison, "Where is the Middle East", **Foreign Affairs**, vol. 38, no. 4,(1960), p. 665.
[75] Baskın Oran, **Turkish Foreign Policy- Facts and Analyses with Documents, (**Utah: Utah University Press, 2010), p. 336.

namely Eastern Siberia and Volga Region is the heartland. He reviews his theory as; *"whoever dominates the Eastern Europe, dominates the heartland; whoever dominates the heartland dominates the global island, and whoever dominates the global island dominates the world."*[76] At that period, closest neighbours to the heartland like Germany, Austria, and Ottoman Empire were consisted internal side of the crescent and even Britain as big colonial power, South Africa, Australia and US were left outer crescent. Even though, Mackinder claimed that a German-Russia alliance could dominate the world. Spykman developed another theory called "Rimland" which argued importance of controlling Euroasia to dominate the world. He suggest creating an inner cresdent to increase the controlling the world. His theories affected most of the Cold war policies of US.[77] For example, Turkey is one the inner crescent countries that played an important role in the cold war. These geopolitical power theories which based on military power or balance of power are outdated. New geopolitical instrument is having sufficient resources and security of the supply of this.

Middle-East emerged as a Western phrase which leads their foreign policy during the Cold War. On the other hand, Mediterranean area the core of the energy geopolitics became the petrol rich Middle East and natural gas Russian sphere. New discoveries has been conducting different areas of the world like shale gas in America, North African and East Mediterranean natural gas findings open a new geostrategic area of interest in international politics.

[76] *Ibid.*
[77] *Ibid.*

At the present day, the energy demand of the world is driven by the developing countries. China and India leading the demand and it will be to do so. In the geopolitical perspective, China will have a strong word in the energy policies which would affect the world. Currently, in the oil USA is the lead consumer, following the EU and China. India also consumes the 3% of world oil in the 2011 indicators. [78] Middle East is the world main origin of oil production in the world. Geopolitical position of the region will remain the same according to World Energy Outlook 2014 that predicted the importance of Middle East oil in the global demand. However, if expected Caspian oil reserves become definite, regional importance will increase. In addition, natural gas is also an important resource for the global market. Russia and Iran holds the 50% of world natural gas reserves. Russia is the leading producer and the exporter of natural gas in the world. The Caspian region mainly Azerbaijan is an emerging power in the area.

Oil and natural gas preserves its place in the growing global energy demand. Suppliers, consumers and transit countries have advantageous position. Scarcity of the resources and non-equal distribution of resources raise the new framework of supply security policies. USA has been prioritising the framework especially after the energy crises. For example, USA holds 500-550 million barrel oil as strategic reserves for supply security and prevents price shocks.

[78] Cenk Sevim, **Küresel Enerji Stratejileri ve Jeopolitik**, Seçkin Yayıncılık,2012, Ankara, p.133.

1.2. Geopolitics of European Union on Energy

EU has a *sui generis* structure but also has a very important geopolitical position. EU covers over 42 million km^2 and has 503 million habitant which is the third largest population after China and India.[79] As of March, 2015, it has twenty-eight members and economically has its own currency in eighteen member countries and has single market mechanism with a supranational and intergovernmental structure. Economically, EU is the biggest economy of the world with having 20% of world gross domestic product (GDP).[80] It is obvious that Union has its power and importance on economical sphere in the world and also politically can be seen as soft power. In case of energy, EU is one of the key aspects when it comes to allocating policies or taking economical decisions, it has strong hand on the table. It has large economy and even though national interests prevent some common decisions but economical resolutions taken according to mutual gain. Internally, differentiated integration has been continued in different areas like Monetary Union (MoU) or Schengen area. On the other hand, externally creation of High Representative of the Union for Foreign Affairs and full time President for European Council in 2009 raises its voice in international area. These also geopolitically initiate an identity for the union.

[79] European Union facts and figures, http://europa.eu/about-eu/facts-figures/living/index_en.htm [20 September 2014]
[80] European Commission, Trade and Investment 2014, http://trade.ec.europa.eu/doclib/docs/2014/january/tradoc_152062.pdf [25 September 2014].

1.3. Mediterranean Energy Geopolitics

Mediterranean has always been a complicated area with its different cultural elements and economical divisions but also it took attention in the last century with its problems, wars and political obstacles. In actual and core reason of this concentration has been energy resources and also geographical advantages of the region. In terms of energy resources, it has the world largest oil reserves nearly 50% and it has approximately 35% natural gas reserves of the world.[81] The other importance of the region is having important canals for the world energy security: Suez Canal (Egypt) and most likely the vital Strait of Hurmuz (Iran-Israel) which holds 45% of energy flow of the world. ,

Mediterranean is also one of the important neighbourhood of EU even though the only area which entitled under a specific title as EMP or UfM. In the global context, European policies toward the region should also be considered in the context of balances in energy. The reason is that the relations are based on differentiated strategy. That is to say, EU energy policy on Mediterranean can be seen as “core” and “peripheral” relations which differentiated by member states. Differentiated integration is one of the integration methods in internal policies but energy issue clashes with the national interests especially with the affairs of Middle East and nearby region. Mediterranean region has had trembling balances politically. National and international energy policies ended up with divided regional energy spaces that are rendering the main obstacle in the energy game.

---

[81] United States Energy Information Administration, International Energy Statistics, 2013, http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=3&pid=3&aid=6&cid=ww,r5,CG8,&syid=2010&eyid=2014&unit=TCF. [17 October 2014.]

Endogenously, the clash of power in Union between Germany and France opened a rivalry and leaded to Euro-Mediterranean initiative by France. France has its post colonial influence over North Africa and in 2008 Union for Mediterranean initiative of former French President Nicolas Sarkozy increased its area of influence. German-Russian energy cooperation provoked France to turn own energy supply. Germany as the main distributer of Russian gas to Europe protects Russian interests in EU to remain its strong position on energy. Germany is the lead importer of Russian gas following by Turkey in Europe and also one of the European green energy flag in electricity. This diverse interest also affects the Middle-east and Mediterranean policy of the EU which Germany is in other side because of the internal interests. The deep of German- Russian alliance on energy could be understood from Syrian policy distinction of Germany from EU. This internal clash of power also affects the relations in energy but in the geopolitical context, Mediterranean area has the sum of fragmented relations which national and international energy policies conduces the regional energy spaces.

On the other neighbourhood, emerging of China and India energy demand also has their card on the energy game. As an example, Algeria, as lead natural gas exporter in the region announced in December, 2014 that they will sell more to Asia in the coming years.[82] The past energy crises in oil and European energy supply crises proved that it is not important to be a key producer solely. The paradigm of energy supply security also played a vital role in the policy determination. Along this

[82] "Algeria Plans to Boost Natural Gas Shipments to Asia" Bloomberg, December 9, 2014. http://www.bloomberg.com/news/articles/2014-12-09/algeria-plans-to-boost-natural-gas-shipments-to-asia. [18 December 2014]

line, the future scenario for increasing the green electricity imports from Mediterranean also emphasizes the future energy corridors in the Mediterranean which has been implicating. Escribano support that this shifts would change the nature of the regional relations to green- electricity producers and transit countries with EU.[83]

On the global context, in the long term, the importance of the Mediterranean would also be increased especially because of emergence of North African countries as hydrocarbon suppliers also as green electricity exporters. It is important that new mapping of energy corridors and control of key geopolitical turns in production of oil and gas in the area also would be tender more advantages in the energy strategies.

1.4. Major European Energy Routes

Economy of EU is growing day by day which requires more sources to carry on. Shows that EU-28 energy production is 810 million tons of equivalents (mtoe) and energy imports are 923 mtoe, furthermore total energy consumption was 1.105 mtoe in 2012.[84] It needed reasonable and secure supply of energy. EU can produce its source but their capabilities of resources are not adequate. The insufficient amount of sources caused high portioned of import of energy from various sources. After the gas disputes between European transit Belarus 2006 and 2007 affected badly despite the crises that was solved in the short period of time. The main bells for European countries rang after Ukraine-Russia crises in 2009. EU had faced the reality of how

[83] Gonzalo Escribano, "Convergence towards Differentiation: The Case of Mediterranean Energy Corridors" **Mediterranean Politics**, vol. 15, no. 2, (2010), p. 212.

[84] EU energy in figures: statistical pocketbook 2014, European Commission, http://ec.europa.eu/energy/publications/doc/2014_pocketbook.pdf [28 July 2014].

much depending on Russia on energy that led to weakening the relation between EU and Russia. Ongoing Ukraine crises have been the biggest dilemma for energy dependency of the Union. Incusing of Crimea to Russia and Ukraine turmoil with political clashes with Russia also brings the question of security of energy supply besides dependency. After these crises, diversifying energy imports became EU priority and it is continuing to be an ultimate aim. There is an insufficient unity in creating a common energy policy but shocking experiences integrate the ideas of diversity in energy supply and energy security. This idea comes up with new route plans that diversify the routings. Currently, main European gas pipeline is coming from Russia through direct pipelines to neighboring EU members like Finland, Estonia, Latvia and North Stream to Germany under Baltic Sea.

Map 1.1 shows below current and future planned routes in Europe. Russia is main supplier for natural gas and current discoveries in North Africa, Mediterranean and Caspian started to change the routes of energy flow. Main planned project is called “Southern Gas Corridor” that originated from Azerbaijan which is a European Commission initiative to diversify energy routes in 2008. It contains South-Caucasus Pipeline (SCP), Trans-Anatolian Pipeline (TANAP), and Trans-Adriatic Pipeline (TAP). Caspian gas that is precisely an Azerbaijani discovery is one of the important discoveries made recently. Thereby, in the European energy diversification policies Caspian area was the main exporter. Before the southern gas corridor, there were two alternative pipeline projects which are Caspian-origin Nabucco and Russian-sourced South Stream. Nabucco was one of the glorious projects of its time in 2009 which was an alternative natural gas pipeline project that originated from Russia across the Caspian and Turkey to Europe. In the beginnings of the project, it backed up by EU

and USA but because of the political disagreements, high level of costs and insufficient amount of gases; it is assumed as "dead" after the replacement of new projects. Especially, the dead blow of the project is when the European part of the pipeline called as "Nabucco-West" substituted to TAP by the Shah Deniz shareholders. After that, Nabucco was put on shelve. The other alternative project is South Stream that proposed in 2012. As the Map 1.1 illustrates South Stream project is originated from southern Russia to Bulgaria and European markets via pipelines under the Black Sea. The pipeline would allow gas flow by bypassing Ukraine. The project owned by Gazprom[85] with %50 shares. After the first and second Ukraine crises, South Stream lost its attention by EU. The European leaders clearly defined that diversifying the European energy market doesn't mean that constructing a new pipeline entirely coming from Russia again. The European part of the South Stream, Bulgaria especially put lots of efforts on project because of the transition expenses. After the annexation of Crimea by Russia, European Commission launched heavy economical sanctions on Russian companies which affect the construction of the project, too. European Commission announced those South Stream bilateral deals with Russia and the transition countries Bulgaria, Hungary, candidate EU member Serbia violate the EU law which puts a setback to the project. Russia was insisting on the project but on the one-day Turkey visit of Russian president Vladimir Putin, it was announced that they would not continue to project. In the Press conference, Putin stressed that if EU doesn't want to carry out to project, it will not continue.[86] This shocking news affects the gas dynamics of EU. South Stream considered as

[85] Gazprom is a Russian global energy company which is %50 government owned that holds the world largest natural gas reserves. Gazprom is the main supplier of oil and gas in Russia and Europe has been the key consumer of company's marketing strategy.

[86] "So long South Stream? New Russian-Turkish Pipeline announced", **Natural Gas Europe**, December 1, 2014, http://www.naturalgaseurope.com/new-russian-turkish-pipeline-announced. [2 December 2014].

dead after this announcement. Putin also pronounced the new natural gas pipeline to Turkey may call "Turkish Stream" under the Black sea and it will carry the gas to Greece and European markets. As January 2015, this new project has been continuing with negotiations between Turkey and Russian authorities to further developments.

Map 1.1: International Gas Pipeline Projects[87]

*current and future gas pipelines for Europe

Southern Gas Corridor is the biggest natural gas pipeline chain project in last century. Azerbaijani offshore drilling in Caspian Sea, to be precise Shah Deniz I&II is the main producer of Southern Gas corridor. Azerbaijan has been exporting gas to Georgia via South Caspian Pipeline (SCP). It is following the same route with crude oil pipeline Baku-Tbilisi-Ceyhan. Alongside with the project strategy, existing SCP

[87] L. Unigovsky, **Diversification of natural gas supply into Ukraine**: **Realities and perspectives,** Oil and Gas Conference Report, October 24, 2012. http://www.ngbi.com.ua/LTD_1.htm [12 December 2014].

will expand though Azerbaijan to Georgia. The second phase of the project is TANAP which is the Turkey lap of the corridor. As Map 1.1 shows, TANAP destination starts with Georgian border and finishes with the Greek border where it connected TAP for European markets. The last ring of the corridor is TAP which will carry the gas through Greece and Albania under the Adriatic Sea into Italy.

This Caspian origin routes are the main possible contributor of the EU. Current updates presents that SCP expansion construction has been continuing with new compressor stations. On the other hand, TANAP construction will start in April, 2015 and due to finish in 2018. TAP project targeted to be concluded in 2020. Shah Deniz shareholders announced that the first gas will flow in 2018 in SPC to Turkey and one or two years later it will reach to Europe via TAP.

1.3. Existing and Planned Mediterranean Gas Pipelines

Apart from the Caspian and Russian energy exports, southern side of the EU also provides incentives for the energy policy. The main reason is Algeria as the third supplier of the total natural gas exports of the EU. Also, resource-rich partners like Libya, Tunisia and Egypt and the reserves themselves keep the attention to the region for energy security. Qatar and Nigeria are not considered as Mediterranean country but in the regional energy balance they played an important role for the future scenarios. In the case of Mediterranean, there are Algeria, Egypt and Libya exporters of the EU. Libya and Egypt exports lower quantity of natural gas. Algeria is the second main supplier of natural gas. Egypt exported 0.1% and Libya 1.8% of total natural gas to EU. On the other hand, Qatar is the fourth supplier of gas which has

undiscovered reserves yet like Mauritania. In addition, Qatar is the largest LNG exporter in the world and also a significant supplier of oil.[88] According to US Energy Information Administration, third largest reserves of world's natural gas are located in Qatar.[89]

Map 1.2: Mediterranean Natural Gas Pipelines [90]

The existing Mediterranean pipelines are Trans-Mediterranean gas pipeline which lies between Algeria-Tunisia-Sicily and Italy mainland, Maghreb-Europe gas pipeline is also originated from Algeria to Morocco and to Spain, Medgaz pipeline which runs directly from Algeria to Spain and Green Stream pipeline from Libya to Italy. Qatar and Nigeria exports gas via shipping to Europe. Map 1.2 above shows the Trans-Mediterranean in purple line. Trans-Mediterranean pipeline constructed in

[88] Qatar, United States Energy Information Administration, http://www.eia.gov/countries/analysisbriefs/Qatar/qatar.pdf [25 November 2014].
[89] *Ibid.*
[90] Christofer, Coats, "Galsi pipeline suffers what could be final blow", Forbes, February 14, 2013. http://www.forbes.com/sites/christophercoats/2013/02/14/galsi-pipeline-suffers-what-could-be-final-blow/ [25 November 2014].

1980s which was one the deepest pipeline projects at the time.[91] In the mid 2000s, Tunisian part of the pipeline expanded. Currently, Transmed pipeline carries 33 billion cubic meters (bcm) in a year.[92] Medgaz pipeline (blue line in map 1.2) which stated to flow in 2011 that carries eight bcm natural gases in a year. EU targeted to increase 8 bcm more in 2030. Maghreb-Europe (MEG) the yellow route above also known as Pedro Duran Farrell Pipeline (PDFP) which is other main pipeline of Mediterranean gas to Europe that constructed in 1996. MEG exports Algerian gas to Morocco toward Spain under the Strait of Gibraltar. Currently, it carriers 11.5 bcm gas in a year and it is expected to increase 9.5 bcm more in the 2030 with the related expansions. [93] Greenstream as green line in the Map 1.2 above is Libya origin pipeline to Europe which started the gas flow in 2004. It started from Libya thought Sicily and to Italy which carries 11.5 bcm gases in a year.

There are also three main planned projects in the region. Under the energy diversification policy, EU supported Midcat pipeline project that referred as strategically important because it will increase the Mediterranean gas flow to the North. Medgas pipeline increase the supply to Spain but this inclusion of new pipeline has no concrete influence to the rest of the Europe because of insufficient interconnection of Spain and France. Midcat will increase the capacity with a new pipeline along with the Mediterranean coast of the Spain to France. Currently, the project is in the process of feasibility studies but it is listed as a key project in the final European Energy Security Strategy. The other planned project is Galsi pipeline

[91] C.J. Dean, "Geography", **Geographical Association,** vol. 67, no. 3, (1982), p. 258.
[92] Supplying the EU Natural Gas Market, Final Report,2010, https://ec.europa.eu/energy/sites/ener/files/documents/2010_11_supplying_eu_gas_market.pdf [15 December 2014].
[93] *Ibid.*

project that has shown in orange line above connect Algeria to Sardinia under the Mediterranean Sea to Italy. It was announced in the beginnings of the millennium and it has been in the trans-European energy networks back then. It is considered that it will flow 8 bcm in a year. However, as December 2014, there is no final investment decision for the project shareholders which concluded to loss of priority. Trans-Saharan is the other planned project which is from Nigeria by splitting up Africa into two to Algeria toward Europe. The red line in the map 1.2 shows the planned route. It targeted to originate Nigel delta of Nigeria to Algeria to feed the Mediterranean gas. It is considered as cancelled because of the high costs of construction. There is also another planned project called Eastern Mediterranean Pipeline Project which targeted to a submarine pipeline from Cyprus to Greece and to Europe that is Israeli and Cypriot sourced. It will be analyzed in the forthcoming section.

Economical viability is the main reasons of failing the projects. Galsi also failed because of the other economically feasible routes like Medgaz and Transmed. However, Trans-Saharan also has political hurdles to overcome but it is concluded that exports of Nigerian gas via shipping is cheaper than a pipeline.[94]

1.6. East-Mediterranean Natural Gas Discoveries

Mediterranean Countries has very different economies like oil and natural gas power or dependent to energy. Even though, there are diverse economies because of the Middle East as the heart of the oil in the world and the other resources in the region, Mediterranean is in the prior policy area of the Union. Eastern Mediterranean

[94] *Ibid.*

defined as Cyprus, Israel, Jordan, Lebanon, Syria and Palestinian Authority.[95] Historically, hydrocarbon drilling is started with the oil exploration in Syria but commercial production fire up in mid 1970s. Even though, Israel and Syria both gas producing countries could be able to drill commercially till 1980s Syria and mid-2000s Israel.

Currently, the largest reserves of oil in the Eastern Mediterranean in Syria whereas the largest proved natural gas reserves are in Israel with the latest discoveries.[96] In global scale these reserves are relatively insignificant. Region has proved 2.5 million barrel oil and 18.2 tcf[97] natural gas. However, the North African side of Mediterranean 65 million barrel oil and 239 tcf natural gas has been discovered.[98]. Lebanon, Jordan, Cyprus and Palestinian Territory did not have significant proved reserves but the successful exploitations of Levant Basin discoveries should change the level of reserves of Palestinian Territories and Cyprus. Lebanon has huge natural gas potential of natural gas. Indeed, the Lebanese Prime Minister announced that estimated quantity of gas may be around 2718 bcm.[99] The other discoveries encourage Lebanon to consider their importance of its own offshore potential. Political instabilities have delayed the licensing of their onshore areas for the third time. Current problems of delimitation of the exclusive economic zones in the region also affected the future of Lebanese gas production. Furthermore, the attempt to reach an agreement with Cyprus on EEZ delimitation has failed. However,

---

[95] U.S. Energy Information Administration, Eastern Mediterranean Region. http://www.eia.gov/countries/regions-topics.cfm?fips=EM [24 December 2014]

[96] *Ibid.*

[97] Tcf stands for a unit of measurement for natural gas which is Trillion cubic feet.

[98] U.S. Energy Information Administration, Eastern Mediterranean Region. http://www.eia.gov/countries/regions-topics.cfm?fips=EM [24 December 2014]

[99] "Lebanese Gas Reserves Likely to be Larger than Expected", **Natural Gas Europe**, October 30, 2013. http://www.naturalgaseurope.com/lebanese-gas-reserves-larger-expectations [2 November 2014].

Israel agreed with Cyprus on delimitation in 2011 which resulted as a contested EEZ overlap between the Israel and Lebanon.[100] These political hurdles make more difficult to continue to gas exploitation in the area and future of Lebanese gas production.

Israel boosts up the Eastern Mediterranean energy game. 2009, Tamar field and 2010, Leviathan field discoveries encourages the regional states to exploration in the region. Turning point of the regional energy game is these Israeli findings that change the picture. Israel government decided to export 40% of its natural gas for national security concerns. Israel turns an importer to an exporter country and joined the gas competition in the region. After that, Cyprus licensed US-based Noble Energy Company in Block 12 namely "Aphrodite" in 2008. In 2011, Noble Energy announced that significant natural gas discoveries approximately seven tcf has been found.[101] Noble energy also owns Israeli the Tamar and Leviathan field drilling licence which estimated total 28 tcf natural gas. Cyprus also licensed the Block 2, 3 and 9 to Italy-Korean consortium ENI-KOGAS and completed first drilling at the end of 2014. Energy Minister of Cyprus announced that Block 9 has no sufficient amount of gas namely dry.[102] Immediately after, Energy minister also announce in

[100] Karen Ayat, Lebanon: Israel's intent to unilaterally demarcate its maritime borders violates the international law, **Natural Gas Europe**, January 6, 2014.
http://www.naturalgaseurope.com/lebanon-israel-maritime-borders-international-law [13 November 2014].
[101] "Noble Energy Announces Significant Natural Gas Discovery Offshore Republic of Cyprus", December 28, 2011,
http://files.shareholder.com/downloads/ABEA-2D0WMQ/3894220238x0x530943/686438EC-7872-404F-8415-0F61E568CC6B/NBL_News_2011_12_28_General_Releases.pdf [25 December 2014].
[102] "Gas finds always 'hit and miss'", **Cyprusmail,** December 23, 2014.
http://cyprus-mail.com/2014/12/23/gas-finds-always-hit-and-miss/ [15 November 2014].

January 21, French energy company TOTAL which has the licence for Block 10 and 11 in Cyprus is likely to abandon in Cypriot gas research.[103]

Palestinian authorities have licensed the British Gas Group in the 2000s to the block 1 namely Gaza Marine. In 2000, BG group announce the one tcf natural gas has been found.[104] Israel refused to support the production and avoid of financing the gas revenues because of the political setbacks. In the result of the problems, Israel blocked the production and exports. Israel reduced the Gaza's maritime control to 3-2 nautical miles because of the Hamas[105] victory in the elections and declared Gaza as a "hostile entity".[106] The situation is changed after the Russian involvement. Russian president Vladimir Putin and Palestinian President Mahmood Abbas made an investment agreement to develop Gaza onshore production which has re-enacted the countries potential again in January, 2014.[107]

The other Eastern Mediterranean countries Egypt and Jordan more likely are the customers of the region. Egypt is a complicated case that is the reverse scenario of Israel. Eastern Mediterranean gas discoveries first started in 1980s with Egypt. As a result of that, huge amount of reserves discovered and Egypt became the heart of the region. Not only the natural gas but Egypt also is oil rich country which start to

---

[103]"TOTAL likely to ditch current Cyprus offshore gas search" **Reuters**, January 21, 2015. http://uk.reuters.com/article/2015/01/21/cyprus-gas-total-idUKL6N0V01YW20150121 [21 January 2015].

[104] "Areas of Palestinian Authority", BG group, http://www.bg-group.com/260/where-we-work/areas-of-palestinian-authority-/ [10 October 2014].

[105] Hamas, is the Palestinian political party leading by Khalid Mashal that supports of Palestinian liberation in the Israel-Palestine conflict.

[106] " Israelis declare Gaza 'hostile'", BBC, September 19, 2007. http://news.bbc.co.uk/2/hi/7002576.stm [15 October 2014].

[107] Helmi Moussa, Russia preparing to develop Gaza gas field, Al-**Monitor**, January 24, 2014. http://www.al-monitor.com/pulse/ar/business/2014/01/russia-palestine-offshore-gas-field-gaza.html [24 November 2014].

profit from natural gas as much as crude oil after the discoveries. Thus, Egypt has the top performing refinery in the area namely Midor Refinery. Increasing of international investment in onshore area has assisted Egypt to use of gas domestically and even though currently most of the power stations are using gas. Also, Egypt has also exported natural gas to Middle East and Europe. However, this scenario was changed after the rising of domestic consumption which made to find new resources essential after the millennium. Egypt is also important gas supplier: for example in 2008, after the Israeli deal, Egypt became the main supplier of Israel. The direct subsea pipeline from Egypt to Israel called the Arish-Ashkelon pipeline was carried the 40% of Israeli domestic gas consumption. The main pipeline of the continent is Arab-Gas pipeline which runs through Egypt-Jordan-Syria-Lebanon where Egypt was also a key supplier. In the late 2010, British Petrol had promoted new fields to meet the demand of the Egyptian domestic consumption.[108] In the light of these gas shortages, Egyptian Ministry of Petroleum had implemented a policy that preservation of one third of total gas consumption and one third for future generations and allow only remaining one third for the export.[109]

Egyptian position is changed after the Arab spring which changes the entire region. Political instabilities led to energy shortages but most likely frequent energy shutdowns. After 2011, Military coup d'état leading by Fatah El-Sisi took the control of power in Egypt. The main result of these unrests was Arab-Gas pipeline mostly had terminated. Syria and Lebanon brunch are currently offline. The Egyptian-Jordan line continues to flow but very low volumes which are contracted.

[108] Walid Khadduri, "East Mediterranean Gas: Opportunities and Challenges" **Mediterranean Politics,** vol. 17, no.1, (2012), p. 112.
[109] *Ibid.*

Arish- Ashkelon pipeline also terminated after the coup for political reasons. Domestic production also affected by assaults from opposition demonstrators. Sisi government put some leverages in the energy. British Petrol announced that they will extent the production in Egypt in new two blocks in November, 2014.[110] Furthermore, this priority is leaded to three lateral summits by Greece-Egypt-Cyprus in November, 2014 which ended with Cairo declaration.[111] The declaration is the commitment of a high level cooperation in economy, energy, fight against terrorism etc. In addition to new discoveries, Italy based Energy Company ENI announced that the new discoveries have been found in the western dessert of Egypt.[112] For the export options, current Egyptian Petroleum Minister, Sherif Ismail announced that Egypt is still considering the gas exports from Israel in January, 2015.[113]

Egypt has the key position in the region. Eastern-Mediterranean discoveries namely Israeli and Cypriot findings has export difficulties because of the geopolitical problems. Cyprus priority was constructing the LNG terminal which is terminated because of non-sufficient sources to make the high-cost LNG terminal investment. Israel is also a prior option for discoveries in LNG where Cyprus and Israel merge. The other option is East Mediterranean pipeline which plans to construct under the Mediterranean Sea from Israel-Cyprus to Greece through Europe. Israel proposes this

[110] "BP expands in Egypt with $240 million investment in two new exploration blocks", November 10, 2014, http://www.bp.com/en/global/corporate/press/press-releases/bp-expands-in-egypt-with--240-million-investment-in-two-new-expl.html [14 January 2015].
[111] "Egypt-Greece-Cyprus Trilateral summit Cairo Declaration, November 9, 2014. http://www.mfa.gov.cy/mfa/mfa2006.nsf/All/B2AF4B08214D31D5C2257D8D002AF831?OpenDocument [15 January 2015]
[112] "ENI announced discovery in Western Desert of Egypt", **Natural Gas Europe**, January 22, 2015. http://www.naturalgaseurope.com/eni-announced-discovery-western-desert-egypt [15 January 2015]
[113] "Egypt still considering Israeli Gas", **Natural Gas Europe**, January 19, 2015. http://www.naturalgaseurope.com/egypt-still-considering-israeli-gas-imports [15 January 2015]

to EU for a reliable source and secure route for east-med gas.[114] The viability and feasibility studies have been going. Cyprus also backed up the plan. Cyprus, as an indigenous source of EU, supports the project. This option is still in the table but Cyprus and Israel also discuss the option of using current facilities in Egypt which is offline. Egyptian infrastructures of LNG have some contractual problems with the foreign investors that Egypt should overcome. The most profitable option in the current situation is the Egyptian facilities which would make Egypt the crucial location that they lost.

1.7. Energy Supply Security for European Union

Promoting the East-Mediterranean gas production is one of the key goals of the EU. Especially, the importance of diversifying energy resources with secure routes for Europe has been increasing. Natural gas is the key source of the Europe that raises the concerns over diversifying. East-Mediterranean reveals as European owned source and Cyprus as a member state, could be a trustable way to export Israeli gas, too. Furthermore, EU put the Eastern Mediterranean corridor option Projects of Common Interest (PCI) list in 2012 which covers the years 2013-2020. Eastern Mediterranean corridor has faced the political objections raised by Turkey, lack of investment, regional political hurdles, high costs that blocked the further developments. Turkish strategy that links East Med with Turkey via direct pipeline from Israel would compete the project. Cyprus future as the potential supplier will be depending on the further drilling developments. Israel, who raises the plan, mostly

[114] "Israel proposed an East-Med pipeline" **Natural Gas Europe**, November 24, 2015. http://www.naturalgaseurope.com/israel-proposed-an-east-med-pipeline [15 January 2015].

has been searching different export options like from Egypt through foreign markets and neighbouring countries. Greece is another part of the corridor currently in the project of the new transit routes like TAP and continuation of planned Turkish stream to Europe which will be discussed further. As of March 2015, this is unlikely to do so that the future of the project is unknown. The developments of drillings will mostly determine the future of the project.

2. Future Prospects and Possible Mediterranean Energy Rivalry

2.1. Question of Regional Energy Hub in Mediterranean?

Paradigm of energy politics have been changing and developed the new phenomenon. "Regional energy hub" is the one of the strategic policy of the transit countries or possible transit countries which aims to be not only the transit country but also a hub for international companies to run their businesses nearby. The main point is to draw off the foreign investment to the country. From the geopolitical perspective, being a regional hub develops the country economically and politically. Changes in energy policies and geopolitical importance of the countries in the Mediterranean opened the energy hub rivalry which was mostly driven by Cyprus and Turkey.

Firstly, ROC as one of the EU member states has important cooperation in the area. After the hydrocarbon discoveries of island, its importance has been growing especially for regional energy cooperation. Desire of being a regional energy hub is the key objective of Cypriot government since the beginnings of the regional energy game. Israel which is the milestone of the East-Med gas findings has also close ties

with Cyprus. Even though, two countries have expressed the full cooperation in energy. Cyprus and Israel signed an exchange and protection of intelligent agreement in 2014 which shifted the relations to the highest level.[115] Cyprus also made some agreements with other neighbouring countries like Egypt. Trilateral summit of Cyprus-Greece-Egypt in 2014 boost up the regional cooperation of the island. Internally, Cypriot economy has been in financial crises since 2010. Regional hydrocarbon activities of the Mediterranean opened window of opportunity financially. Domestically, Cypriot government made some legal regulations to sustain and well prepared strategies. For example, Cypriot Finance Minister Harris Georgiades announced that national sovereign fund and investment funds will be created for economical improvements.[116] Cyprus wants to use the full advantage of being the only member of EU in the area. On the other hand, Commercial agreements have been done with Noble energy and ENI-KOGAS consortium in Cyprus EEZ but no export agreement yet to Asia or Europe. Cyprus strategy is also prior to build a LNG terminal before any export options. Depending on this, the important step was the construction of VTTV Vasiliko oil storage terminal in the island.[117] VTTI is the owner of the terminal but the important point is one of the world energy commodities giant Danish Vitol is the partner of the terminal. Vassiliko terminal is the only storage of its kind and opened in November, 2014 which made Cypriot hand strong in the rivalry. The other development is Hulliburton which is the major oilfield services company opened the regional office in the island in 2014.

---

[115] Signing of Agreement between Cyprus and Israel, April 28, 2014, http://www.mfa.gov.cy/mfa/mfa2006.nsf/All/ABFF8E4AD433CBE7C2257CC8003AB4E2?OpenDocument [14 December 2014].

[116] Harris Georgiades, East-Mediterranean LNG to the EU from Israel and Cyprus: Prospects and Challenges, 5th Annual Mediterranean Oil & Gas Conference, Nicosia, May 8-9, 2014.

[117] VTTV Vasiliko Cyprus, http://www.vtti.com/terminals/vttv-cyprus [18 December 2014].

This is reviewed as “vote of confidence” for Cyprus in favour of the foreign investors by Cypriot Energy Minister in May, 2014.[118] In the light of these developments EU supported Cypriot exploitation activities, even though it was accounted that it could be a European owned source but it is accepted as an insufficient source.

Turkey is another possible regional energy hub in the Mediterranean energy game. Turkey as a candidate country of EU has been standing at the EU door for more than fifty years that seeking dominance position in the region on energy. Turkish strategy has two primary intents to be a regional hub and transit route so called “fourth corridor” of regional gas suppliers like Middle East and Caspian to Europe apart from Russia, Norway and Algeria. Together with this strategy, Turkey is a growing economy and its energy needs also increasing. Turkey’s intentions have also other reasons that domestic vulnerability of resources and also gaining the geopolitical influence in Europe due to the ownership of the key infrastructures. Turkey is the second customer of Russia after Germany in Europe which also seeking for diversify routes. Russian energy policy and foreign policy are interrelated which is also same for Turkey. In terms of regional geopolitics, the oil pipeline from Azerbaijan Baku-Tiflis Ceyhan (BTC) had increased the importance of Turkey as transit country. North and West energy corridor strategies also developed after BTC. As an example Nabucco, TANAP, South Stream or Southern Gas Corridor projects revealed after the BTC. Currently, Southern Gas Corridor is the foremost energy project of EU strategy. Turkey lap of the corridor, TANAP, provide Turkey very important position in Europe. Also, Turkish state-owned oil and gas company TPAO

[118] “Halliburton ‘vote of confidence’ in Cyprus”, **Cyprusmail**, May 9, 2014. http://cyprus-mail.com/2014/05/09/deal-clinched-with-halliburton/ [13 October 2014].

had increased its share to 19% in Azerbaijani Shah Deniz field, the source of the Southern Gas corridor securing its energy needs and energy routes for Europe.[119] In other neighbourhood, Iran has the third world largest gas reserves which opposed by US sanctions have not been largely exploited. Since 2001, Iran has been exporting gas to Turkey even though Iranian government offered TPAO indulgence on its onshore drillings for gaining support from Turkey against the sanctions.[120] Iran as a neighbour would also another leverage of Turkish geopolitical position. Final shift is the cancelling of South Stream and new pipeline project called Turkish stream. Russia will construct a new pipeline to Turkey under the black sea. Furthermore, Gazprom warned Europe to link their energy pipelines to Turkey otherwise after the Turkish Stream, they would lose the gas from Ukraine.[121] EU had already announced that Southern Gas Corridor will be the main project of European energy market and Turkey has the key role. Because of that, steps have been continuing deliberately. Especially, terminating of South Stream had difficult economical circumstances for Southern Europe members like Bulgaria.

In the light of the developments, deep competition has been continuing in the regional energy arena. Scarcity of the resources has allowed the transit countries strategic privileges that also change the routes global energy flow. Coskun and Carlson argued that this competition has provided the energy-rich states strategic and geopolitical leverages to become superpower.[122] EU supported its member Cyprus

---

[119] "TPAO ups stake in Shah Deniz Project", **Azernews**, May 30, 2014. http://www.azernews.az/oil_and_gas/67564.html. [14 October 2014].
[120] "Iran Offers Turkey Natural Gas Concessions" UPI, April 27, 2010. http://www.upi.com/Science_News/Resource-Wars/2010/04/27/Iran-offers-Turkey-natural-gas-concessions/UPI-54761272398014/ [9 October 2014].
[121] "Gazprom warns EU to link to Turkey pipeline or lose Russian gas" **Yahoonews,** January 14, 2015.http://news.yahoo.com/gazprom-warns-eu-turkey-pipeline-lose-russian-gas-212440234.html?soc_src=mediacontentstory&soc_trk=tw [15 January 2015].
[122] Bezen Balamir Coskun and Richard Carlson, "New Energy Geopolitics: Why does Turkey Matter?", **Insight Turkey**, vol.12, no.3, (2010), p.218.

politically but the economical needs and Southern Gas Corridor project had increased the importance of Turkey. Cyprus has huge intention toward being a hub but recent developments of its hydrocarbon fields decreasing the potential. Also the most important setback is the Cyprus problem which has been going on about a half century. Greek Cypriots are the legitimate government of the island in the external arena. Greek Cypriot government admitted that the prosperities of the island are owned by both communities but hydrocarbon drillings has been going without any comprehensive settlement since 2011. It was seen as a catalyst for peace solution but it did not. Turkey opposed to Greek Cypriot drillings in order to Turkish Cypriot rights and started seismic surveys on behalf of the Turkish Cypriots. Cyprus brings forward the problem to EU several times especially aiming to block Turkey's membership negotiation with EU. Tensions have been going on in the region which has negative effect on hub strategy.

2.2 Delimitation of EEZ and Regional Legal LOS Disputes

Delimitation of territorial sea and exclusive economic zone (EEZ) have been determining by United Nations Law of The Sea Convention (UNCLOS). Firstly, importance of coastal states increased in the 17th century. The first ideology was to determining the limits of defence capacity which failed to take long. Technological advances in armament industry and economical prosperities of the seas change the concept of hegemony. The UN Law of the Conferences successively held in 1958, 1960 and lastly 1982 which concluded UNCLOS. According to the Convention, a coastal state shall have 12 nautical miles territorial sea with its all sovereignty

rights.[123] EEZ concept is rather new idea that the original aim was the delimitation of fishery zones. When it is understood that the only prosperity of the seas are not the fish solely, the importance of EEZ is became distinctive. In 1982, UNCLOS identifies Exclusive Economic Zone as an area that starts the baseline of the coastal states and covering the territorial sea up to the 200 nautical miles which subject to different regime.[124] Briefly, coastal states can exercise the rights of exploring and exploiting of energy resources like oil, gas, water, wind etc and also has jurisdiction of marine research activities, protection of environment.

Law of the sea (LOS) is an important and one of the controversial concepts of the international law. Even though, Malcolm Evans argued that law of the sea have more concrete steps than international law toward sovereignty and jurisdiction with an absolutist approach.[125] The reason is that sovereignty and jurisdiction is in the core of the law of the sea and it has been determining by solution-based basis. The paradox of LOS that it has been developing steadily in a strong basis in the international law but at the same time it is one of the problematic areas that hosts lots of the conflicts. As an example, Yemen and Eritrea conflict over EEZ that Yemen allowed to expand its maritime borders tiny island of its coastline. The problem occurred when the island was destroyed by volcano explosion. Yemen continues to control its maritime borders while UNCLOS does not address geographical changes in shifting baselines.[126]

---

[123] United Nations Convention on Law of the Sea, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm [14 December 2014].
[124] *Ibid.*
[125] Malcom Evans, **International Law,** 3rd edition, (New York: Oxford University Press, 2010), p. 651.
[126] Blakely Elizabeth Whilden, " Navigating the Conflict Over Natural Gas Reserves in the Levant Basin of the Mediterranean Sea", **North Carolina Journal of International Law & Commercial Regulation,** vol. 39, no. 3, (2014), p. 948.

In the Mediterranean, LOS has been standing because of regional problems which are different in nature. Unlike the other conflicts, this area has been struggling conflicts over a half-century. Algeria, Tunisia, Morocco, Egypt, Cyprus, Lebanon have signed the convention however Israel, Turkey and Syria have not. Israel and Palestine have established their maritime zones under the Oslo Accords.[127] The problematic area is the Eastern Mediterranean side in this concept. Five Eastern-Mediterranean countries have established the EEZ according to UNCLOS by bilaterally. Lebanon and Israel submitted to UN for delimitating their EEZ in 2011 which includes the incompatibility of maritime borders. Lebanon and Cyprus have negotiated to delimitate EEZ and reached an agreement in 2007. Cyprus ratified immediately but Lebanon failed to do so. Cyprus and Israel reached an agreement that identified the boundaries of EEZ in 2011 which also submitted to UN. Lebanon immediately protest against Cyprus and made an official complain that Cyprus violated their agreement.[128] Currently, Lebanon and Israel have disputed areas resulted as overlap between the two states. The other disputed area is the Palestinian maritime borders which agreed 20 nautical miles in the Oslo Accords but it is reduced to 3 or 2 nautical miles by Israeli encroachments because of the 2008 and 2011 Gaza War. Cyprus on the other hand is another disputed area. Cyprus problem similar as Israeli-Palestinian conflict are the origin of the overlaps. Cyprus signed the maritime agreements with Lebanon, Egypt and Israel. Turkey and Turkish Republic of Northern Cyprus signed a continental delimitation agreement to make reaction to

[127] Oslo Accords is the milestone of the Israeli-Palestine conflict which signed in 1993 and 1995 respectively, which parties recognize each other for the first time and committed to negotiate for peaceful solution.

[128] Blakely Elizabeth Whilden, " Navigating the Conflict Over Natural Gas Reserves in the Levant Basin of the Mediterranean Sea", **North Carolina Journal of International Law & Commercial Regulation,** vol. 39, no. 3, (2014), p. 959.

the start of Cypriot drilling in 2011.[129]Turkish Cypriot side support that they have equal rights in the prosperities of the Cypriot seas which cannot be exploited before a comprehensive settlement. Theodore Kariotis explained the Turkish stand in this conflict as protective approach against sovereignty.[130] Kariotis also claimed that Turkey problems with LOS in the Aegean Sea are different nature from Cypriot case and Cyprus has the right to delimitate of its EZZ. Exploitation activities of the ROC have increased with new licensing of new blocks in 2012 and 2013. This was resulted in escalated tensions in highest level that affected Cypriot negotiations. Turkey granted for surveying on behalf of the Turkish Cypriots. This also had brought upon to EU level by ROC against candidate member Turkey. Currently, seismic survey ship Barbaros has been continuing scientific marine research.[131]

Regional LOS disputes are most likely because of deep political setbacks. The source of the problems is instability of the relations affects the economical benefits and foreign investments. Israeli-Palestinian and Cyprus problem has been dominating the regional relations since fifty years. Solution is unlikely to do so in a near future because of the rising tensions in the area. However, Scovazzi argued that disputes over unilateral declarations should be solved bilaterally or by the arbitrations in an international court.[132]

---

[129] Continental Delimitation agreement between Turkey and TRNC, official journal of Republic of Turkey, http://www.resmigazete.gov.tr/eskiler/2012/10/20121010-3-1.pdf [15 January 2015].

[130] Theodore C. Kariotis, "Hydrocarbons and Law of the Sea in the Eastern Mediterranean: Implications for Cyprus, Greece, and Turkey", **Mediterranean Quarterly,** vol. 22, no. 2, (2011), p. 49.

[131] "Barbaros resumes seismic survey inside Cypriot EEZ", **Cyprusmail**, January 6, 2015. http://cyprus-mail.com/2015/01/06/barbaros-resumes-seismic-survey-inside-cypriot-eez/ [18 February 2015].

[132] Tulli Scovazzi, **Maritime Boundaries in the Eastern Mediterranean Sea**, The German Marshall Fund Of The United States, June 2012.

2.3. New Trends in European Energy Policy and Possible Geopolitical Shifts

Technological advances day by day which also effect on new resources. Apart from the new energy routes of Caspian and Central Asian countries there are also hopeful new resources that will enlighten the future. Currently, shale gas is the newest trend in the world which has been developing. Current research doesn't show the efficiency of the shale in near future. According to International Energy Agency world energy outlook 2014, main shale gas deposits are in USA and Canada and Poland, Germany, France and UK in Europe.[133] Shale gas developments in the US and Canada are extremely important and raises future expectations. Also, IEA had predicted no supply future for 10 years.

Environmental concerns also pushes for green energy. Increasing energy demand has been driven the energy technology toward renewable energy. Europe is the lead renewable energy producer that would continue to do. Renewable energy mostly use in the electricity production in Europe. Solar, wind, hydroelectric and geothermal is the common resources that has been using. Recent the most important achievement is in solar and wind in the world. Germany success in solar power encourages the further advances. Wind technology especially in UK is in advance technology. Wind tribunes and also solar energy panels are highly expensive investment. The result is no sufficient because in the UK case it costs more than it saves. New technologies could deliver cost effective solutions which EU supports innovative projects to development.

---

[133] Fatih Birol, "IEA's World Energy Outlook 2014", **Centre for Strategic and International Studies**, Washington, November 24, 2014.

Finally, Antarctica is the most popular reserve that estimated huge amount of natural gas. It wasn't explored commercially because of the insufficient climate since the millennium. Climate change and the continuation of melting down of the polar sea open the rivalry. The problem is that the right of explore on the Arctic which is commonly argued as common heritage of mankind ideology in the international law. Russia, North European countries like Norway and Canada has been claiming rights over Arctic exploration. However, environmental concerns also prevent further developments.

In conclusion, world oil production will increase 3 million barrel in recent years.[134] Natural gas in line with the oil demand also will increase leading by China and India. Future of the renewable energy efficiency has been developing which are the world's mostly needed resources. World pollution is in the higher levels which is emphasizes in the IEA's outlook that we had used the half of the pollution margin that given to us by nature until now[135]. The importance of transit countries will be clearer. Russia will be the main actor and dominance over the global energy market in near future but the new discoveries of Norway, North Africa, Caspian and development of shale gas in USA started to shifts energy geopolitics from now on.

[134] *Ibid.*
[135] *Ibid.*

CONCLUSION

Energy has always been respected as a sector that linked with foreign policy even though, a matter of sovereignty. Europe is facing this reality since the last ten years. World global energy challenges hit mostly the European continent. EU as the third largest energy market is vulnerable in energy. At the beginning, energy was the fundamental element of integration that ECSC in 1951 and Euroatom in 1957. When we look at today, we don't see a community we see a union that is highly depend on external resources on energy. This vast changing is the proof of the energy challenge of the world in the last century.

The latest enlargements affected EU system entirely because new member states especially southern European countries had no strong economical and political conditions. New members also increase the energy dependence ratio. In the major enlargement in 2004 and 2008 enlargement, Estonia, Bulgaria, Finland, Latvia and Lithuania are the five out of ten new members those fully depend on Russian gas. Late 2008 financial crises affected EU like the rest of the world. European economies were shaken deeply while the prices of energy have increased. Energy security concern had risen after the high prices, environmental problems where the energy demand and dependence also had increased. At this point, European countries started to see the energy as a common interest that should be discussed. Because of that, the need of a common energy policy revealed again. Latest, European Commission composes a new vice-president since 2014 who is responsible from Energy Union. However, energy policies are still held by intergovernmentalistic approach that legally energy union is not implemented yet. EU consists of 28

member states meaning that different 28 energy different energy policy. Also, German- French clash of interests affected the common act on energy. This is the biggest setback but the latest efforts intent to overcome because it may cause to split up the union in the future.

As global demand increasing, energy imports of EU also increasing. This reality pushes European countries to take serious measures. EU has made an EESS which priors the Energy diversification, energy union and supply security in the energy policy in 2014. This is a strong step that member states agreed to move upon. Strategy sets out the concrete actions to moderate the domestic consumption and entitled the important energy projects for Europe. For example, the strategy underlines the importance of Southern Gas Corridor for Europe. To be admitted that nobody was predicted a Customs Union or Shengen area from the beginning but it happened. This is a reality that Europeanization of energy policy seems not to be established in the near future.

The most concrete steps toward reducing the dependence are promoting alternative energy sources and supporting alternative routes apart from Russia. It is obvious that oil and natural gas are crucial for the European industry. However, alternative energy sources production had increased with the advances of the technology in EU. In order to overcome dependency, alternative sources of energy can be used for electricity. Energy security can be achieved by means of solar, wind, hydroelectric and geothermal energy. Climate change conferences of UN and internal emission targets of the countries illustrates that the importance of renewable energy will be more important in the further years. EU targets 27% reduction of CO_2

emissions by 2030. The question is could renewable energy be efficient as the fossil fuels like oil or natural gas? Currently, the reason is no although they are quite efficient in electricity production. Weather conditions are very important for renewable energy resources. Solar energy and wind is the common alternative energy for Europe which depends on sustainable weather conditions. As mentioned above, Germany produces its 50% of their electricity consumption from solar power in 2013. Also UK is producing its certain amount of electricity from wind power and the technology of wind is in the highest level. These are good success stories that step forward in the European continent. However, UK wind tribunes produced only one percent of total need.[136] On the other hand, Germany has invested huge amount of money to solar power but the future efficiency is still unknown. It is obvious that renewable energy doesn't solve the energy dependency and energy security problem of EU in the current situation.

As a result of these energy weaknesses the importance of new energy routes and the energy geopolitics came forward as a vital need for EU. Another point to note that in recent years the distribution of world's proven gas reserves has changed. As a result, players of the energy game would change also the balance of power will be depending on the new energy routes which is the main ground of the current rivalry. This is one the reason of policy shift to the Mediterranean. This opened up new horizons for the EU to the security of energy supply which has become mandatory. The policy of various pipelines between the EU's policy options, so that the accurate issues is the creation of diversity of sources of energy imports. Russia as

[136] Emily Gosden," Electricity demand hits highest this winter- as wind power slumps to its lowest", **The Telegraph**, January 20, 2015. http://www.telegraph.co.uk/news/earth/energy/11358062/Electricity-demand-hits-highest-this-winter-as-wind-power-slumps-to-its-lowest.html [25 February 2015].

the main supplier has the energy dominance over the Europe. The emerging of Caspian and Mediterranean region was change the game for Europe. Azerbaijan is the shining supplier in Caspian which has the strategic goal of being a reliable partner to build Energy Bridge. Currently, European main natural gas routes are coming from Norway, Russia on Ukraine and Baltic States and Algeria from Mediterranean energy corridor. Geopolitically, Mediterranean area is on the important energy routes of the world and also a very resource-rich area. Geopolitics is directly related with the energy but the paradigm of energy security had changed. Under the framework of energy supply security, the importance of geopolitical aspects for creating energy strategy for supply had approved. The rivalry of possible transit countries and economical side of the opportunity the concept of 'regional energy hub' had been continuing in the region. Is Mediterranean could be an incentive in the future of European energy security or the recent development in the East Mediterranean could be a solution for Europe's energy demand?

Firstly, Strait of Hurmuz and also the world leading energy canal also increase the strategic importance. EU relations with the region ended up a comprehensive partnership agreement and at last Union for Mediterranean had established. The beginning of the cooperation is mostly economic but Mediterranean also constitutes the second gas supplier of EU namely Algeria. Mediterranean is an important renewable energy producer with huge potential especially solar power. Under the UfM, energy projects has been containing to support financially though connecting the electricity grids with the Mediterranean. The projects support financially the solar energy storage facilities and developing the domestic infrastructure for future connections. Also, Mediterranean energy corridor has been

flowing natural gas from Libya, Algeria and Nigeria from 4 main pipelines. However, the exports are mainly LNG which is more expensive from the other suppliers. The problem in the region is the scarcity of the countries. Nigeria had eliminated to construct new pipeline option Trans- Saharan to European markets; they prefer shipping which is more profitable. Libya has political unrests in the country which prevent further development and threatens the energy security for future. Algeria is the second natural gas supplier is considering selling more to Asian market because of the high prices. Joint efforts to increase the amount of gas with new pipelines like Galsi or Trans-Saharan or even though extension of Arab-Gas pipeline to Europe is not likely to happened because of political and economical reasons. In the context of European energy security, the export agreements secure the European gas currently but in the future it would change. The future of the region natural gas supply to Europe is mostly depending on new discoveries in North Africa. Otherwise, most probably it would lose the place as natural gas exporter to Europe. In the renewable energy supply, Mediterranean would be the main supplier of electricity to Europe in near future.

What about the Caspian and Eastern Mediterranean energy geopolitics? Theories of geopolitics namely Mackinder and Spykman argued the Europe, as a part of the global island with Asia and Africa however, these theories also refers Mediterranean and Middle-East in the inner crescent to the island. This geopolitical world order has influenced Cold War determinations. New policy element is energy in geopolitics but geopolitical theories emphasises the importance of neighbouring countries which is currently supply security of the region. Geopolitical arguments have not changed but the geopolitical policies have changed according to having

sustainable resources and supply security. In energy matter, Russia dominates Europe. Mediterranean geopolitics has not changed yet, but the geopolitical policies have been changing. They are the main parties of European energy game. First of all, Eastern Mediterranean has newly discoveries in the gas market. It is noted to say that all the Eastern Mediterranean explorations are natural gas. Israel first explored relatively high amount of natural gas in the 2010. Successively, Cyprus also has found natural gas in their EEZ but not as much as Israel. For the world global reserves, Eastern Mediterranean explorations are not high but having Israel in the game as the strategic partner of USA in the region change the attitude of the world. Mediterranean Sea is one the most problematic cases in terms law of the sea. Politically, regional problems like Israeli-Palestinian or Cyprus question has thrown to backstage after the discoveries. Even though, some authorities review the discoveries that it can be a catalyser for peace in Cypriot case. However, it failed to promote any influence in Cypriot negotiations, besides negotiations have been suspended since November, 2014 by Greek Cypriot government by arguing the Turkish presence in the Mediterranean Sea on behalf of the Turkish Cypriots.[137] Cyprus and Israel have and export problem that hasn't solved yet. It has been five years that two countries have not made any export agreement. This shows the fragile situation in the region. Egypt is the only neighbouring country that intent to buy gas from both. Are these discoveries which one them is an EU member can contribute the energy supply security of EU? Cyprus and Israel together had supported to export gas to Europe. The proposed pipeline project Eastern Mediterranean pipeline project is still on the table but it is unlikely to continue. Currently, Israel and Cyprus is

[137]"Anastasiadis pull out of talks", CyprusMail, October 7, 2014.
http://cyprus-mail.com/2014/10/07/cyprus-talks-suspended/ [8 October 2014].

considering to liquefied the natural gas in the Egyptian facilities and sell it via Egyptian ports.

The second and the utmost important possible supplier is Caspian region namely Azerbaijan. Currently, European Commission priors the Azerbaijani origin Southern Gas Corridor which is planning to flow natural gas to Europe in 2020. It is originated from Azerbaijan and flow to Turkey through SPC and it continues with TANAP in Turkey. TAP will link to TANAP in Greece and it will reach the European market. This corridor is important because of the route. It can be extended in the future depending on the new possible suppliers in the region like Iran. European energy supply security had breathed after the southern gas corridor. However, Russia construction of Turkish Stream and Gazprom threats to replacing of Turkish Stream to Ukraine gas again put EU into trouble.

To answering the question of regional hub, Turkey is closer to do so. It is one of the biggest economies in the world and also recent strategic energy gains raised its potential. Cyprus, as a member state, could be seen as trustable investment but the recent failing in the explorations in the island also pull down the possibility. The big companies invested in the islands and the huge storage terminal constructed but the regional political problems always have influenced the further big investments. The recent Turkish stream is the signature of the Turkey’s rising power in energy. As realistic perspective, Turkey’s geopolitical position is more suitable and beneficial for every side.

In conclusion, new developments of the EU energy policy and the Mediterranean dimension of this policy in energy geopolitics are analyzed in this thesis. First of all, historical evolution of the European energy policy and the relations with Mediterranean were examined. Moreover, EU energy market supply and demand revenues are observed. Furthermore, Mediterranean and EU relations are analyzed under the framework of energy. After that, Mediterranean capacity in the European energy security is examined. Also, new energy discoveries of Eastern-Mediterranean and Caspian region are analyzed in the concept of regional hub. Finally, future energy trends and possible shifts in the energy geopolitics with the new reserves are examined.

BIBLIOGRAPHY

"Algeria Plans to Boost Natural Gas Shipments to Asia" **Bloomberg**, December 9, 2014. http://www.bloomberg.com/news/articles/2014-12-09/algeria-plans-to-boost-natural-gas-shipments-to-asia. [18 December 2014].

"Anastasiadis pull out of talks", **Cyprusmail**, October 7, 2014. http://cyprus-mail.com/2014/10/07/cyprus-talks-suspended/ [8 October 2014].

Anderson, Simon, **Russia- Syria Offshore Gas Deal Injects New Factor into Peace Talks,** Washington Institute, 27 December 2013.

"Areas of Palestinian Authority", BG group, http://www.bg-group.com/260/where-we-work/areas-of-palestinian-authority-/ [10 October 2014].

Ayat, Karen, "Lebanon: Israel's intent to unilaterally demarcate its maritime borders violates the international law", **Natural Gas Europe**, January 6, 2014, http://www.naturalgaseurope.com/lebanon-israel-maritime-borders-international-law [13 November 2014].

"Barbaros resumes seismic survey inside Cypriot EEZ", **Cyprusmail**, January 6, 2015. http://cyprus-mail.com/2015/01/06/barbaros-resumes-seismic-survey-inside-cypriot-eez/. [18 February 2015].

Barcelona Declaration adopted at the Euro-Mediterranean Conference, Barcelona, 1995, p. 5, http://ec.europa.eu/research/iscp/pdf/policy/barcelona_declaration.pdf [10 October 2014].

Barbe, Esther, Anna Herranz Surralles, "Dynamics of Convergence and Differentiation in Euro-Mediterranean Relations: Towards Flexible Region-Building of Fragmentation?" **Mediterranean Politics**, vol. 15, no. 2, (2010), pp.129-147.

Barbe, Esther, Ferran Izquierdo, **Present and Future of Joint Actions for the Mediterranean Region** Martin Holland(ed),Common Foreign & Security Policy; the record of reforms, (London: Pinter, 1997).

Bicchi, Federica, **European Foreign Policy Relations toward the Mediterranean**, New York: Palgrave Macmillan, 2007.

"Biden Visits Cyprus as Gas Fuels Reunification Talks", **Bloomberg**, May 21,2014. http://www.bloomberg.com/news/articles/2014-05-20/biden-visits-cyprus-as-gas-fuels-reunification-talks [15 January 2015].

Birol, Fatih, "IEA's World Energy Outlook 2014", **Centre for Strategic and International Studies**, Washington, November 24, 2014.

Bosse, Giselle, Anke, Shmidt-Felzmann, "The Geopolitics of Energy Supply in the 'Wider Europe'" **Geopolitics**, 2011, vol. 16, pp. 479-485.

"BP expands in Egypt with $240 million investment in two new exploration blocks", November 10, 2014, http://www.bp.com/en/global/corporate/press/press-releases/bp-expands-in-egypt-with--240-million-investment-in-two-new-expl.html [14 January 2015].

Brauch, G., Hans, Antonio Marguina and Abdelwahab, Biad, **Euro-Mediterranean Partnership for the 21st Century**, New York: Palgrave, 2000.

Coats, Christopher, "Galsi pipeline suffers what could be final blow", **Forbes**, February 14, 2013, http://www.forbes.com/sites/christophercoats/2013/02/14/galsi-pipeline-suffers-what-could-be-final-blow/ [25 November 2014].

Commission of The European Communities, *Commission proposes revision of the Multiannual Research Programme. Information [CCR Research Programme] 64/74. 1974*, http://aei.pitt.edu/10349/1/10349.pdf [16 June 2014].

Continental Delimitation agreement between Turkey and TRNC, official journal of Republic of Turkey, http://www.resmigazete.gov.tr/eskiler/2012/10/20121010-3-1.pdf [15 January 2015].

Coşkun, B.Bezen, Richard Carlson, "New Energy Geopolitics: Why does Turkey Matter?", **Insight Turkey,** 2010, vol. 12, no. 3, pp.205-220.

Davison, Roderic H. , "Where is the Middle East*"* **Foreign Affairs**, vol. 38,no. 4, (1960), p 665.

Dean, C. J. , "Geography", **Geographical Association,** vol. 67, no. 3, 1982, pp.258-260.

Declaration of Intent, REMEP, Rome, 2004, http://ec.europa.eu/dgs/energy_transport/international/regional/euromed/energy/doc/statuto_remep_en.pdf. [12 October 2014].

Directive of Promotion of use of renewable energy, **Official Journal of European Union**, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=en [27 July 2014].

Electricity production by source, **Eurostat**, 2013, http://ec.europa.eu/eurostat/statistics-explained/index.php/File:EU-28_Electricity_production_by_source,_2013_(in%25).png [25 July 2014].

Energy dependence of EU, **Eurostat**, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdcc310 [15 September 2014].

"ENI announced discovery in Western Desert of Egypt", **Natural Gas Europe**, January 22, 2015. http://www.naturalgaseurope.com/eni-announced-discovery-western-desert-egypt [15 January 2015]

"Egypt's energy crises", **Al-Jazeera**, June 9, 2014. http://www.aljazeera.com/video/middleeast/2014/06/egypt-energy-crisis-201469105429829911.html. [20 October 2014].

"Egypt-Greece-Cyprus Trilateral summit Cairo Declaration, November 9, 2014. http://www.mfa.gov.cy/mfa/mfa2006.nsf/All/B2AF4B08214D31D5C2257D8D002AF831?OpenDocument [15 January 2015].

"Egypt, Russia sign cooperation agreements", **Natural Gas Europe**, February 10, 2015. http://www.naturalgaseurope.com/egypt-russia-sign-cooperation-agreements [15 February 2015].

"Egypt still considering Israeli Gas", **Natural Gas Europe**, January 19, 2015. http://www.naturalgaseurope.com/egypt-still-considering-israeli-gas-imports [15January 2015].

"Energy", European Neighbourhood Journalism Network, http://www.journalismnetwork.eu/index.php/_en/purpose/energy/ [18 October 2014].

Escribano, Gonzalo, "Convergence towards Differentiation: The Case of Mediterranean Energy Corridors", **Mediterranean Politics,** vol. 15, no. 2, (2010), pp.211-229.

Euro-Arab Masreq Gas Market Project, EU Neighbourhood Info Centre, http://www.enpi-info.eu/mainmed.php?id=302&id_type=10 [20 November 2014].

European Commission (2011), The Market for Solid Fuels in the European Union in 2010 and the Outlook for 2011, http://ec.europa.eu/energy/coal/studies/doc/2011_eu_market_solid_fuels_2010.pdf [18 November 2014].

European Commission (2011), The Market for Solid Fuels in the European Union in 2010 and the Outlook for 2011,

http://ec.europa.eu/energy/coal/studies/doc/2011_eu_market_solid_fuels_2010.pdf [18 November 2014].

EU Energy in figures, Statistical Pocketbook 2014, European Commission, http://ec.europa.eu/energy/sites/ener/files/documents/2014_pocketbook.pdf [10 September 2014].

European Commission, Green Paper on "An Energy Policy for Europe", {COM(2007) 1 final}.Brussels, 2007, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0001&from=EN [17 October 2014].

EU Commission (2014c), Communication from the Commission to the European Parliament and the Council, European Energy Security Strategy, Brussels, 28.5.2014, COM (2014) 330 final, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0330&from=EN [15 October 2014].

European Commission, Trade and Investment 2014, http://trade.ec.europa.eu/doclib/docs/2014/january/tradoc_152062.pdf [25 September 2014].

European Council Conclusion on Middle East Peace Process, **Official Journal of European Communities**, 1994, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31994D0276&qid=1419254980889&from=EN [15 November 2014].

European Council Conclusions, European Council, October 24, 2014. http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145397.pdf [1 November 2014].

European Council Resolution, **Official Journal of the European Communities**, June 9, 1980, http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31980Y0618(02)&from=EN [15 September 2014].

European Union facts and figures, http://europa.eu/about-eu/facts-figures/living/index_en.htm [20 September 2014].

Evans, Malcolm, **International Law,** 3rd edition, New York: Oxford University Press, 2010.

Featherstone, Kevin, **The Mediterranean challenge: cohesion and external preferences,** In: Lodge, Juliet, (ed.) **The European Community and the Challenge of the Future**, London: Pinter, 1989.

First European Energy Charter Treaty: Early Perspectives for Investors, European Commission Directorate General for Energy (DGXVII), Official Publication of the European Communities, Luxamburg, 1995.

"Gas finds always 'hit and miss'", **CyprusMail,** December 23, 2014, http://cyprus-mail.com/2014/12/23/gas-finds-always-hit-and-miss/ [15 November 2014].

"Gazprom seeks to export all LNG from Israeli Tamar Project", **Bloomberg**, February 26, 2013. http://www.bloomberg.com/news/articles/2013-02-26/gazprom-holds-talks-to-export-all-lng-from-israeli-tamar-project. [

"Gazprom warns EU to link to Turkey pipeline or lose Russian gas" **YahooNews,** January 14, 2015. http://news.yahoo.com/gazprom-warns-eu-turkey-pipeline-lose-russian-gas-212440234.html?soc_src=mediacontentstory&soc_trk=tw [15 January 2015].

George, Stephen, **Politics and Policy in the European Community**, Oxford: Oxford University Press, 1985.

Georgiades, Harris, "East-Mediterranean LNG to the EU from Israel and Cyprus: Prospects and Challenges", 5th Annual Mediterranean Oil & Gas Conference, Nicosia, May 8-9, 2014.

Gosden, Emily, "Electricity demand hits highest this winter- as wind power slumps to its lowest", **The Telegraph**, January 20, 2015. http://www.telegraph.co.uk/news/earth/energy/11358062/Electricity-demand-hits-highest-this-winter-as-wind-power-slumps-to-its-lowest.html [25 February 2015].

"Halliburton 'vote of confidence' in Cyprus", **CyprusMail**, May 9, 2014.http://cyprus-mail.com/2014/05/09/deal-clinched-with-halliburton/ [13 October 2014].

Helmi, Moussa, Russia preparing to develop Gaza gas field, **Al-Monitor**, January 24, 2014.http://www.al-monitor.com/pulse/ar/business/2014/01/russia-palestine-offshore-gas-field-gaza.html [24 November 2014].

Hitiris, Theo, **European Union Economics,** 5th Edition, UK: Pearson Education Limited, 2003.

Imports of Natural Gas by country origin, **Eurostat**, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:EU-28_imports_of_natural_gas_-_percentage_of_extra-EU_imports_by_country_of_origin.png [14 October 2014].

"Iran Offers Turkey Natural Gas Concessions" **UPI**, April 27, 2010. http://www.upi.com/Science_News/Resource-Wars/2010/04/27/Iran-offers-Turkey-natural-gas-concessions/UPI-54761272398014/ [9 October 2014].

"Israelis declare Gaza 'hostile' ", **BBC**, September 19, 2007. http://news.bbc.co.uk/2/hi/7002576.stm. [15 October 2014].

"Israel proposed an East-Med pipeline" **Natural Gas Europe**, November 24, 2015. http://www.naturalgaseurope.com/israel-proposed-an-east-med-pipeline. [15 January 2015].

Kaminara, Andrulla, "Energy and security in the East Mediterranean: How energy will play an increasingly important role in the security of the East Mediterranean", **South East European Studies,** Oxford, March, 2014.

Kariotis, Theodore, "Hydrocarbons and Law of the Sea in the Eastern Mediterranean: Implications for Cyprus, Greece, and Turkey", **Mediterranean Quarterly,** vol.22, no. 2, (2011), pp.45-56.

Khadduri, Walid, East Mediterranean Gas: Opportunities and Challenges, **Mediterranean Politics,** vol.17, no.1, (2012), pp. 111-117.

Keck, Zachary, China and Russia Sign Massive Natural Gas Deal, **The Diplomat**, May 21, 2014. http://thediplomat.com/2014/05/china-and-russia-sign-massive-natural-gas-deal/ [16 January 2015].

Kyoto Protocol, United Nations Framework Convention on Climate Change, http://unfccc.int/kyoto_protocol/items/2830.php [10 September 2014].

"Lebanese Gas Reserves Likely to be Larger than Expected", **Natural Gas Europe**, October 30, 2013. http://www.naturalgaseurope.com/lebanese-gas-reserves-larger-expectations. [2 November 2014].

Matlary, H. Janne, **Energy Policy in the European Union**, UK: Macmillan Press, 1997.

Mediterranean Solar Plan, Union for Mediterranean Secretariat, http://ufmsecretariat.org/mediterranean-solar-plan/ [25 July 2014].

"Noble Energy Announces Significant Natural Gas Discovery Offshore Republic of Cyprus", December 28, 2011, http://files.shareholder.com/downloads/ABEA-2D0WMQ/3894220238x0x530943/686438EC-7872-404F-8415-0F61E568CC6B/NBL_News_2011_12_28_General_Releases.pdf [25 December 2014].

Nuclear power plants in Europe, European nuclear society, http://www.euronuclear.org/info/encyclopedia/n/nuclear-power-plant-europe.htm [10 November 2014].

Oran, Baskın, **Turkish Foreign Policy- Facts and Analyses with Documents,** Utah: Utah University Press, 2010.

Panabianco, Stefania, **New Euro-Mediterranean Cultural Identity**, UK: Routledge, 2003.

Paving the way for the Mediterranean Solar Plan, http://www.pavingtheway-msp.eu/index.php?mylang=english [27 July2014].

Paving the way for the Mediterranean Solar Plan, Final Report, 2010, http://www.pavingtheway-msp.com/0-PWMSP-Final-Report-March-2011.pdf [27 July 2014].

Primary production of energy by source, Natural Gas, **Eurostat**, http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=ten00076&plugin=1 [15 December 2014].

Production of solid fuels in EU, **Eurostat**, http://epp.eurostat.ec.europa.eu/tgm/mapToolClosed.do?tab=map&init=1&plugin=0&language=en&pcode=ten00076&toolbox=legend [1 December 2014].

Production of primary energy in EU, **Eurostat,** http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/File:Production_of_primary_energy,_EU-28,_2012_(%25_of_total,_based_on_tonnes_of_oil_equivalent)_YB14.png [15 October 2014].

"Renewable energies: success stories", European Environment Agency, **Official Publications of European Communities**, Environmental issue report no 27, 2001.

"Renewables", International Energy Agency, http://www.worldenergyoutlook.org/media/weowebsite/factsheets/WEO2013_Factsheets.pdf [18 October 2014].

"Sarkozy sounds out basis for Mediterranean Union", **Euractiv**, July 16, 2007. http://www.euractiv.com/energy/sarkozy-sounds-basis-mediterranean-union/article-165541 [25 November 2014].

Scovazzi, Tulli. **Maritime Boundaries in the Eastern Mediterranean Sea**, The German Marshall Fund of the United States, June 2012.

Sevim, Cenk. **Küresel Enerji Stratejileri ve Jeopolitik**, Ankara: Seçkin Yayıncılık, 2012.

Signing of Agreement between Cyprus and Israel, April 28, 2014, http://www.mfa.gov.cy/mfa/mfa2006.nsf/All/ABFF8E4AD433CBE7C2257CC8003AB4E2?OpenDocument [14 December 2014].

Sitilides, John," The Modern Geopolitics of the Cyprus Question", **Mediterranean Quarterly**, vol.25, no.1, (2014), pp.77-94.

"So long South Stream? New Russian-Turkish Pipeline announced", **Natural Gas Europe**, December 1, 2014. http://www.naturalgaseurope.com/new-russian-turkish-pipeline-announced. [2 December 2014].

Supplying the EU Natural Gas Market, Final Report, 2010, https://ec.europa.eu/energy/sites/ener/files/documents/2010_11_supplying_eu_gas_market.pdf [15 December 2014].

The Energy Charter Treaty and Related Documents, Energy Charter Secretariat,2004, http://www.encharter.org/fileadmin/user_upload/document/EN.pdf [15 October 2014].

"TOTAL likely to ditch current Cyprus offshore gas search", **Reuters**, January 21, 2015. http://uk.reuters.com/article/2015/01/21/cyprus-gas-total-idUKL6N0V01YW20150121. [21 January 2015].

"TPAO ups stake in Shah Deniz Project", **Azernews**, May 30, 2014.http://www.azernews.az/oil_and_gas/67564.html [14 October 2014].

Treaty establishing the European Atomic Energy Community (Euratom),http://europa.eu/legislation_summaries/institutional_affairs/treaties/treaties_euratom_en.htm [12 June 2014].

Unigovsky, L , **Diversification of natural gas supply into Ukraine**: **Realities and perspectives,** Oil and Gas Conference Report, October 24, 2012. http://www.ngbi.com.ua/LTD_1.htm [12 December 2014].

"UK and Germany break solar power records", **The Guardian**, June 23, 2014. http://www.theguardian.com/environment/2014/jun/23/uk-and-germany-break-solar-power-records [20 November 2014].

United Nations Convention on Law of the Sea, http://www.un.org/depts/los/convention_agreements/texts/unclos/closindx.htm [14 December 2014].

United States Energy Information Administration, World oil production, http://www.eia.gov/countries/index.cfm?view=production [12 November 2014].

United States Energy Information Administration, International Energy Statistics, 2013, http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=3&pid=3&aid=6&cid=ww,r5,CG8,&syid=2010&eyid=2014&unit=TCF. [17 October 2014].

U.S. Energy Information Administration, Eastern Mediterranean Region. http://www.eia.gov/countries/regions-topics.cfm?fips=EM. [24 December 2014].

United States Energy Information Administration, Qatar http://www.eia.gov/countries/analysisbriefs/Qatar/qatar.pdf [25 November 2014].

VTTV Vasiliko Cyprus, http://www.vtti.com/terminals/vttv-cyprus [18 December 2014].

Whilden, Blakely Elizabeth, " Navigating the Conflict Over Natural Gas Reserves in the Levant Basin of the Mediterranean Sea", **North Carolina Journal of International Law & Commercial Regulation,** vol. 39, no. 3, (2014), pp. 927-982.

Xenakis, K. Dimitris and Dimitris N. Chryssochoou, **Europe in Change; The Emerging Euro-Mediterranean System**, UK: Manchester University Press, 2001.

Yorkan, Arzu, "Energy Policy of the European Union and Its Effects on Turkey", **Bilge Strateji**, vol. 1, no. 1, (2009), pp. 27-39.

YAKIN DOĞU ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ

Anabilim Dalı Yüksek Lisans Programı
Yüksek Lisans Tezi

Tez Adı: EUROPEAN ENERGY POLICY: MEDITERRANEAN DIMENSION AND ASPECTS OF GEOPOLITICS

Hazırlayan: FATOŞ ŞAN

Jüri Üyeleri

Asst. Prof. Dr. ALİ DAYIOĞLU:

Dr. MUHİTTİN TOLGA ÖZSAĞLAM:

Dr. SERTAÇ SONAN:

Sosyal Bilimler Enstitüsü'nün Onayı

Prof. Dr. Çelik Aruoba/Dr.Muhittin Özsağlam
Sosyal Bilimler Enstitüsü Müdür/Müdür Yrd