The Greek Turkish Relations in terms of the Natural Gas Networks in Southeastern Europe and the Eastern Mediterranean.

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Abbreviations

APG: Associated Petroleum Gas

BP: British Petroleum

BTU: British Thermal Unit

CoM: Council of Ministers

DESFA: Hellenic Gas Transmission System Operator

EC: European Commission

ENSEC: Energy Security

EU: European Union

FIR: Flight Information Region

IEA: International Energy Agency

IGB: Interconnector Greece Bulgaria

ITG: Interconnector Turkey Greece

ITGI: Interconnector Turkey Greece Italy

LNG: Liquefied Natural Gas

NM: Nautical Miles

OECD: Organization of Economic Co-operation and Development

OPEC: Organization of Petroleum Exporting Countries

PCI: Project of Common Interest

PM: Prime Minister

TANAP: Trans Anatolian Pipeline

TAP: Trans Adriatic Pipeline

TEN-E: Trans European Energy Networks

TCF: Trillion Cubic Feet

U.S.A.: United States of America

UNCLOS: United Nations Convention on the Law of the Sea

Abstract

In the present work I attempt to assess the impact of the southern corridor for Europe's energy security and the consequences of this choice in Greece and Turkey. As Europe's energy needs are growing and production of primary energy is reduced, the pipelines passed through Greece and Turkey will contribute to further non-reliance on Russia as well as to economic and political stability of the southern Europe.

More specifically, the pipelines crossing Greek territory are expected to contribute significantly to the economic aid, opening up many new jobs while the country will play an important role in meeting Europe's energy needs for years to come. Concerning Turkey, the crossing pipelines will boost the county's position as a geopolitical center and will help to normalize its relations with its neighbors.

Geopolitical concerns regarding the routes of the pipelines are apparent and shape not only the choices that need to be made but also the foreign policy goals of the state actors.

Introduction

This work attempts to examine the connection of the natural gas pipeline networks passing through Turkey and Greece with the political relations and the foreign policy strategies of the two states as well as the European Union regarding energy. Energy is a force of economic prosperity, industrial production and political power and consequently, energy security is a vital component on the agenda of every state.

Due to the recent developments regarding the Russian-Ukrainian crisis, the European Union is trying to create new routes as well as new supply options in order to secure its supplies and maintain its energy security. Greece and Turkey are part of these options being both the transit states. Therefore, this paper will analyze these new routes and supply options with the research question being whether the transit cooperation of Athens and Ankara will lead to full scale cooperation in both political as well as economical terms.

The hypothesis is that cooperation between Greece and Turkey would not only help to normalize their relations in general but also to facilitate the realization of their foreign policy goals separately. It is found that the gains that both states can have by working together are greater than the ones while working independently. The preliminary conclusion is that cooperation of the two states is a win-win situation for both of them. That means that the benefits that Turkey can achieve by being an energy hub or transit do not necessarily lead to a loss of power for Greece and vice versa. It is a dynamic situation where only through cooperation and establishment of common ground the aims of Ankara and Athens as well as of Europe can be achieved.

Unfortunately, bibliography regarding the challenges at the meeting point of energy and national security, and of the different policy tools available to address them, is surprisingly weak and there are very few research papers covering the issue of Greek-Turkish relations in terms of the natural gas networks mostly in separate chapters and not as the major topic.

The paper is divided in six chapters and sections covering the broad range of energy security, natural gas, the Greek and Turkish natural gas market, the existing and new routes of supply together with the pipeline networks as well as the issue of Eastern Mediterranean gas. On Chapter 1, an introduction on energy and natural gas is given while Chapter 2 explains Energy

Security and how the theories of International Relations are correlated with Energy Politics. On Chapter 3, there is an analysis of the Greek and Turkish natural gas market as well as a description of the European one. Chapter 4 examines the importance of Russia as a natural gas supplier, the Caspian resources as an alternative to the Russian ones and it underlines the role of Greece and Turkey as transit states. In Chapter 5 the different natural gas pipeline projects that concern Greece and Turkey are explained in detail while on Chapter 6 there is a discussion on the new Eastern Mediterranean gas findings of Cyprus, Iraq and Israel and the way that they could affect European Energy Security. Lastly, the concluding remarks argue that cooperation is vital as well as beneficial for both Greece and Turkey and that energy security could be better achieved when states work together towards a common goal. All these being the factors that shape the relations of Athens and Ankara supporting our hypothesis.

Chapter 1: Introduction on Energy

1.1. Energy

Energy is the basis of the global economy, of growth and social welfare while energy policy is the basic parameter of a state's foreign policy. The energy sector tends to shape worldwide a highly complex and sometimes competitive landscape of alliances and rivalries. The developed societies and economies together with the growing energy needs of the developing countries result to the rapid increase of energy demand and particularly of oil and natural gas worldwide. The largest reserves of fossil fuels are found in certain regions of the world like the Middle East, the Caspian and North Africa.[1] This is why in these areas intense controversies, political, economic and even military ones are often the case aiming in the control of the supply and demand of these commodities. Among all forms of energy, oil and natural gas are the ones with the major concern for the international community and the major frictions.

[1] Natural Gas Reserves, BP, http://www.bp.com/en/global/corporate/about-bp/energy-economics/statistical-review-of-world-energy/review-by-energy-type/natural-gas/natural-gas-reserves.html

1.2. Natural Gas

Natural gas is a vital component of the world's energy supply. With the development of shale gas in North America, its role is likely to continue to expand and its importance will further increase because of the greenhouse gas emissions constrain. It directly competes with other energy inputs and it turns out to be a deeply reliable source[2]. Its main areas of use are power generation, domestic use as well as in transportation and fertilizer industry.

Although Natural Gas is known since ancient times, its commercial use is relatively recent. Around 1785, Britain was the first country to commercialize natural gas; used to light houses and streetlights. During most of the 19thcentury the use of natural gas was almost exclusively for lightning purposes. Back then, there was not any pipeline network to transfer the gas into individual homes so its use was narrowed to street lights. However, after the 1890's with the rise of electricity, most of the cities started converting their natural gas lights to electricity lights. In 1885 though, the invention of Robert Bunsen known as Bunsen Burner brought new opportunities on the use of natural gas. With the construction of pipeline networks, new uses were discovered covering applications of everyday life to industrial and transportation ones[3].

Natural Gas is coming in two different forms. Conventional non-associated gas, coming from reservoirs which are not connected with any known source of liquid petroleum, or else "dry gas" and associated gas or mostly known as APG, which is associated with petroleum deposits and it is mostly composed by Methane (81%). For many years the only way of extracting natural gas was to drill a well straight down into the ground. This procedure though was not very efficient and economically feasible. The technological advances brought two new procedures, vertical and horizontal drilling that allowed the extraction to be more practical. Both are used but horizontal technology, even though more complicated and more costly, is more efficient since it can reach wider formations that are not accessible with the vertical method and also less environmental harmful[4]. The pioneered development of turbine technology, dating back in

[2] The Future of Natural Gas, MIT Study, http://mitei.mit.edu/system/files/NaturalGas_Report.pdf

[3] A Brief History of Natural Gas, American Public Gas Association, http://www.apga.org/i4a/pages/index.cfm?pageid=3329

[4] Directional Drilling Technology, US Environmental Protection Agency, http://www.epa.gov/cmop/docs/dir-drilling.pdf

1900's, is also significant since it is one of the cleanest means used in the gas industry to drive pumps and compressors[5].

Natural gas consists primarily of methane (CH4). It may also contain other gases such as oxygen, hydrogen, nitrogen, ethane, ethylene, propane, and e helium and it is found in the earth's crust at varying depths below impervious strata, such as limestone. If gas is present with oil it is called wet gas, otherwise it is called dry gas.

Since gas is compressible, its volume varies significantly with changes in temperature and pressure and as a result, some standard frame of reference has been established that is the standard conditions as shown in Table 1 below. A cubic foot of gas is the amount of gas needed to fill a volume of one cubic foot under set conditions of pressure and temperature.

Table 1.

Unit of Gas Volume Measurement	Standard Conditions	Area of Common Usage
Standard Cubic Foot (SCF)	14.696 psi (1 atmosphere) and 60°F	USA, Latin America, Africa, Middle East.
Standard Cubic Meter (Sm^3)	100 kPa (0.987 atmosphere) and 15°C	Europe, Canada, Russia.
Conversions: 1 m^3 = 35.315 ft^3; 1 ft^3 = 0.0283 m^3		

Source: IHRDC[6]

Due to the fact that Cubic Meter and Cubic Foot are too small for practical use, the industry uses larger standard quantities with the ones in billion and trillion being the mostly used.

[5] Technology Characterization: Gas Turbines, US Environmental Protection Agency, http://www.epa.gov/chp/documents/catalog_chptech_gas_turbines.pdf

[6] Measurement Units and Conversion Factors, IHRDC, http://www.ihrdc.com/els/po-demo/module01/mod_001_03.htm

Table 2.

Units	Quantity	Symbol ft^3	Symbol m^3	Application
Thousand	1000	MCF	Mm^3	Basic unit of sale
Million	1,000,000	MMCF	MMm^3	Daily well production
Billion	1,000,000,000	BCF	bm^3	Annual field production
Trillion	1,000,000,000,000	TCF	tm^3	Field reserves

If gas volume is measured in m^3, simply replace CF with m^3 within the above symbols. Some companies use K, M°, Giga ("G") and Tera ("T") in place of thousand, million, billion and trillion.

Source: IHRDC[7]

As Table 2 shows, the most common measurements of natural gas are BCM, BCF, TCM, TCF and BTU's. BCM stands for billion cubic meters and it equals of about 35 BCF of natural gas. A BCF is equal to approximately one trillion BTU's. A TCF is equivalent to approximately one Quad. A Quad is an abbreviation for a quadrillion BTU's while a BTU (British thermal unit) is a unit of measurement for energy, representing the amount of heat that is needed to raise the temperature of one pound of water by one degree Fahrenheit.

Consumption of natural gas has been increasing over the last years and today accounts for nearly a quarter of the world's energy supply. The demand for it is growing very fast also promoted by government policies as the cleanest fossil fuel[8]. States need to find the appropriate sources considering economic and political concerns. Natural Gas is mostly transferred through pipelines and this is why politics play a crucial role on gas supply. The three actors under gas supplies are the supplier countries, the consumer and the transit ones. Relations between consumer and supplier countries are less complicated considering bipolarity but the engagement of the transit countries is what brings the biggest concerns. Cooperation among them is very challenging since each state in an independent political entity and the more actors engaged in the

[7] *ibid*
[8] Melling J. Anthony, Natural Gas Pricing and its Future, Carnegie Endowment, http://carnegieendowment.org/files/gas_pricing_europe.pdf

process; the more the political risk is increasing. As in the case of oil, natural gas supplies mostly come from not so political secure regions and the question that emerges is whether these actors can cooperate in the long term in order to achieve security.

Natural gas is widely viewed as an important fuel in most countries' climate and energy policy emitting less carbon dioxide than other fossil fuels. The burning of natural gas produces lower quantities of emissions and in general it does not produce substantial amount of solid waste when generating electricity making it cleaner than the other fossil fuels. The cost of natural gas is also lower than the cost of other fossil fuels, especially oil and as a result it is more affordable. While oil prices are remaining high and volatile, gas prices are remaining in low levels and are not subject to fluctuations. Unlike oil, natural gas requires limited processing to prepare it for use. Even though it is highly sustainable, safety concerns are yet to be examined and its storage is not so practical and easily accessible. Its biggest vulnerability though is that it is mostly dependent on pipelines (as its liquefaction is still a costly process) therefore its distribution is open to geopolitical concerns and as a result, the relations among the actors involved are very crucial to the energy security of each consumer state. The pipeline structure, especially in EURASIA, gives strong political and economical power to those countries that control the pipelines and therefore affect international relations.

Chapter 2: International Relations Theories and Energy Security

2.1. Politics and Energy

International Energy Agency defines Energy Security as ¨the uninterrupted availability of energy sources at an affordable price. Energy security has many aspects: long-term energy security mainly deals with timely investments to supply energy in line with economic developments and environmental needs. On the other hand, short-term energy security focuses on the ability of the energy system to react promptly to sudden changes in the supply-demand balance¨.[9]

[9] Energy Security, International Energy Agency, http://www.iea.org/topics/energysecurity/

Energy is necessary not only for the quality of everyday life but also for the economic growth of a country. Therefore, the main object of every state is to have access to reliable and affordable energy sources, reducing challenges and increasing energy security. The geopolitical aspects are very crucial and have a direct impact on a country's foreign policy shaping its relations with other states.

At first, some countries use their energy sources as an asset to achieve foreign policy goals. Russia is an example of a state that uses its energy sources as a foreign policy instrument. The European Union market is highly dependent on gas sources coming from Russia, covering about a third of its needs, and it is its major consumer[10]. Iran has also followed this example last year, using its rich oil reserves as a strike threatening the U.S.A. and Israel on stopping oil shipments through the Strait of Hormuz. The main example though that clearly depicts how energy sources can be uses as a bargaining tool is the one of OPEC oil crisis in 1973. When the Organization of Arab Exporting Countries proclaimed an oil embargo during the fourth Arab-Israeli war in October 1973, its aim was apparent. The result was the oil price to quadruple to $12 per barrel leading to the 1973-1974 stock market economic crash. The control of such a vital commodity by OPEC countries indicated how oil was used and can be used as a foreign policy weapon to create dependency and as a result control.[11]

It is also common that some states will use political tools in order to acquire energy resources. The main concern of states is not to be dependent on energy sources and to be able to diversify their energy needs in a way that they will be as secure as possible. Regarding the fact that most energy companies are state-owned, the need for political as well as diplomatic tools in order to decide the supplier or the transit is evident. France is a good example of this. The country has been sustaining its nuclear energy program despite the major environmental programs that derive from waste disposal and the increasing security questions following the

[10]OgryzkoOlesia, Russia vs EU Common Energy Policy, European Public Affairs http://www.europeanpublicaffairs.eu/russia-vs-eu-common-energy-policy/

[11] Fattouh, Bassam, Mahadeva, Lavan, OPEC: What Difference Has it Made? The Oxford Institute for Energy Studies, January 2013, http://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/01/MEP-3.pdf

Fukushima accident. The country's energy sufficiency is high in the agenda of its government's strategy.[12]

As a result, a state's energy policy has domestic implications based on institutional decisions on how to regulate and allocate energy resources. The need of states to increase energy security and eliminate challenges that rise from the complex political and economic environment, poses the necessity for energy policies that address all levels of economic, social as well as environmental issues. Concerns like increasing prices, global warming and regional conflicts call for immediate energy policies. Strategies that will decrease the demand for fossil fuels and increase the demand for renewables in order to reduce carbon footprint and face global warming is an example of this analysis. During the last years, incidents like the BP Macondo oil spill and the disaster of Fukushima nuclear facility have driven the focus towards energy policy with the issue of sustainability being also core in political debates[13].

Modern life is highly dependent on access to energy, from everyday needs to industrial ones. Energy supply can serve as a foundation of regional cooperation but also as a source of conflict among producer and consumer countries, or even among producer countries. Interactions between these are what give energy a geopolitical perspective while Politics of Energy put the basis of a nation's survival and well-being. In time of crisis, like the global one the world faced in 2008, these issues swell as the price of energy is the first to go up. International cooperation in different areas such as sufficiency and management of energy sources is urgently required.

2.2. Security and Realist Theory

In an anarchic and competitive international system, the lack of a regulatory authority constitutes a shaping factor for the attitude/policy of every state. Since the relations among states in this anarchic structure are competitive, they need to ensure their security. As a result, states are trying to ensure their security through the concept of 'self help' meaning that they seek their own interests without subordinating the interests of other states.

[12] France, International Energy Agency, Energy Policies of IEA Countries, IEA, https://www.iea.org/publications/freepublications/publication/france2009.pdf

[13]SANDIA National Laboratories, The Goals of Energy Policy http://energy.sandia.gov/wp/wp-content/gallery/uploads/goalsofenergypolicysandia.pdf

For Kenneth Waltz, in the struggle of ensuring power, states create strategies in order to increase their level of security. These could be either internal, focusing on their capabilities in order to sustain their power meaning the size of population, territory, resources, their economic and technological capability, political stability and military strength, or external which means a balance of power through the establishment of alliances[14]. Alliances are central actors in international relations since it is the basic tool of foreign policy with which a state can increase its security level and also a determinant factor for the outburst, spread and the outcome of a war[15].

Geography plays an important role in the formation of strategy and as a result in the formation of alliances. Stephen Walt, in his book 'The origins of alliances', he discusses the balance of threat theory as a reformulation of balance of power theory in order to explain interstate alliances and he argues that states ally not only to balance against power but more importantly to balance against threats. While the distribution of power is an important factor, the level of threat is also affected by the geographic proximity, offensive capability and aggressive intentions. The power of other states can therefore be a burden or an advantage, depending on where it is located, what it can do and how it is used.[16]

The accession in an alliance is a strategic choice of states. The pursuit of national interests can be achieved in a regional or international level rather than in a national one. Alliances constitute a breeding ground for the promotion of policy as well as a means of security amplification.

In this context, energy despite its numerous advantages, bear a number of security concerns as well either for the supply country or the consuming one. Speaking of the advantages of energy, it is clear that a state that disposes resources, raw materials, industry, human resources, technology and production can create policies and afford the funds to support these policies. As a result, a state that owns energy resources can actually be self-sufficient in a way

[14] Waltz, Kenneth N. 1979. *Theory of International Politics*. New York: Mcgraw-Hill Higher Education

[15] Keohane Robert O. 1986. *Neorealism and its Critics*. New York: Columbia University Press

[16] Baldwin, David A. 1993. *Neo-realism and Neo-liberalism: The Contemporary Debate*, New York: Columbia University Press.

and therefore can create its own high strategy. It can also increase its power since the possession of these resources is drifting other factors such as the economy and the impact on other states. [17]

For Waltz, in an anarchic system security is the ultimate goal and only if survival is guaranteed states can seek other goals such as peace, profit and power. Power is the principal means to exert policy and it features control over the resources (economic and military), control over the behavior of others (influence) and control over the outcome. Energy is an important advantage and it can play a crucial role on all three features mentioned. Power over the land and the region can be created through the energy resources. Moreover, in terms of diplomacy, the way that energy sources are transmitted and transported is always under tough negotiations for the control of transport routes and the construction of new ones; pipeline diplomacy.

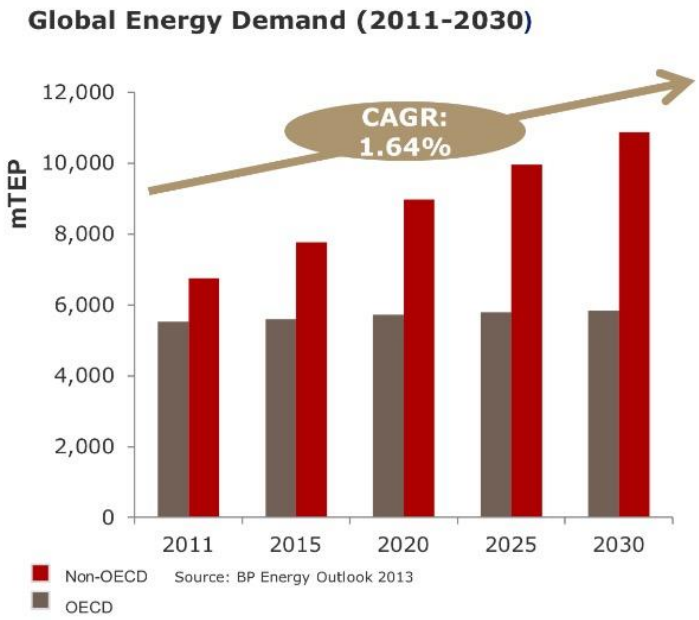
As to the potential security issues, first of all, if the supplier country is located nearby areas with political instability, facing terrorist threats, in an unfriendly regime, there could be negative impact on the expected investments or on the plans of major energy players in the international system. For the consuming country geography plays also a preponderant role regarding the supply, the relations with the suppliers, the energy corridors, the interdependence level and the potential alternatives.

In conclusion, security is the primary goal of the actors in the international system where in order to increase it, they take care of themselves under the principle of self-help. This in turn is capable of causing to other actors in the international system a security dilemma, as the increase of the safety of their own affect the safety of others. As anarchy creates conditions of competition which under Structural Realism is the root of war, states as rational actors are called to take strategic decisions in order to survive. Energy is a significant power factor that strengthens the economy and general power in turn, the foundation of safety and survival. Therefore, it is understood how important the possession and the strategic management of energy resources are, not only from the side of energy security but also from the aspect of the increase of security in general and therefore of survival.

[17] Keppler, Horst Jan, International Relations and Security of Energy Supply, Risks to Continuity and Geopolitical Risks, French Institute of International Relations, 2009, http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/studykeppl/studykeppler.pdf

2.3. Energy Security

Table 3.



Source: BP Energy Outlook 2013[18]

Energy Security has a critical role with serious implications for social, economic and environmental well-being and refers to the uninterrupted availability of energy sources at an affordable price[19]. The question of ENSEC is one of the main concerns on the agenda of every state because of the growing dependency and the political aspects underlying this issue, meaning the relations of the states and their interactions when they need to decide what sources and from where to get them.

At this point, the challenges of ENSEC have to be addressed. First of all, there is the issue of the rising demand. As shown in the Table 3, energy consumption is growing due to the increasing demands mostly from emerging markets. Economic growth in Non-OECD countries has pushed their demand for fossil fuels and especially oil in very high levels. China and India

[18] BP Energy Outlook 2030, BP, January 2013, http://www.bp.com/content/dam/bp/pdf/Energy-economics/Energy-Outlook/BP_Energy_Outlook_Booklet_2013.pdf

[19]Energy Security, International Energy Agency http://www.iea.org/topics/energysecurity/

with emerging economies and expanding population will be the main buyers of energy sources in the forthcoming years. Therefore, energy market dynamics are increasingly determined by these economies with a demand share from 55% in 2010 to 65% in 2035 and fossil fuels remaining the main source of energy worldwide though renewable grow rapidly[20].

Following, another challenge that ENSEC faces is the concentration of resources in the hands of the few. Considering the fact that most energy sources come from not so democratic and political stabilized regions, the security that every nation needs for its energy resources is under pressure. Even though there is the tendency of OPEC countries to stand up as exporters-as is the American case- the main suppliers, which are mostly state-owned companies, come from these problematic regions[21]. Therefore, consumer countries need to take action in the forms of diversification-either of source or of economy- in order to secure their sources.

Environmental Issues place also a challenge with a critical link connecting energy and environment. Environmental impacts arising from the carbon economy and climate change have created a tremble in ENSEC with the need of low-polluting and secure energy sources especially under rising economies that will create remarkable rates of consumptions[22].

Furthermore, another challenge is addressed to the limited spare capacity. The capacity of energy sources is met directly by the demand and none is remaining unused. The correlation between this limited spare capacity and the rising demand by the emerging markets is considered to be one of the greatest confrontation of the new energy era. Specifically about oil, the current level of supply disruptions from both OPEC and non-OPEC producers is very high resulting to a very low spare capacity[23]. Related to this, we are moving towards the last energy challenge which is dwindling supply.

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[20]World Energy Outlook 2012 Factsheet, How will global energy markets evolve to 2035?
http://www.worldenergyoutlook.org/media/weowebsite/2012/factsheets.pdf

[21]Keppler H Jan, International Relations and Security of Energy Supply: Risks of Continuity and Geopolitical Risks, European Parliament
http://www.europarl.europa.eu/meetdocs/2004_2009/documents/dv/studykeppl/studykeppler.pdf

[22]McKibbin Warwick, Wilcoxen Peter, Energy and Environmental Security, Brookings
http://www.brookings.edu/~/media/research/files/reports/2007/2/globaleconomics/200702_01energy.pdf

[23]OPEC Supply Disruptions at Highest Level in EIA Records, Energy Policy Information Center
http://energypolicyinfo.com/2013/09/opec-supply-disruptions-at-highest-level-in-eia-records/

Once the availability of energy sources and mainly fossil fuels decline, the whole economic system will struggle causing prices to skyrocket. Many scholars argue that we are facing an energy crisis that will have as an effect a shift towards renewable energy sources. Yet, it is arguable whether these renewables can take the place of fossil fuels and meet market expectations. The need for long-term sustainable solutions is now in the forefront. At one hand we have the consuming countries who are concerned about the import dependency dilemma and on the other hand we have the exporters who are concerned about the security of demand for their energy sources and as a result the security of their revenues[24]. These two are in most cases contradictory with the actors trying to achieve their aims under the political and diplomatic peplum. In a globalized world with high dependency rates involving around states and fine lines easily to crack as a result of political uncertainties, the Energy Security issue is considered as the major need not just for every individual state but also for the world community as a whole.

Chapter 3: The Greek Turkish Perspective on Natural Gas

3.1. Natural Gas Supply

The last years have witnessed an on-going crisis in the Middle East that has contributed to a sound increase in international crude oil prices and also the emergence of China and India as major consuming markets for the Middle Eastern crude oil. The European Union, poor in energy sources and once one of the major importers of Middle East crude oil, has been adversely affected. The appreciation of crude oil, combined with increasing ecological concerns in EU specially after Kyoto Protocol of December 1997, have contributed to the growing importance of natural gas as a fuel substitute to oil in order to meet the European energy needs[25].

The particular way of transporting natural gas primarily through pipeline networks has increased the importance of Russian reserves to feed the European market. The geographical

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[24]Proninska Kamila, Energy and Security: Regional and Global Dimensions. SiprI, http://www.sipri.org/yearbook/2007/files/SIPRIYB0706.pdf

[25] Nordhaus, William, Life after Kyoto: Alternative Approaches to Global Warming Policies, Yale University, December 2005, http://www.econ.yale.edu/~nordhaus/kyoto_long_2005.pdf

proximity together with the existence of extensive pipeline network already from the Soviet period contributed to the emergence of Russia as the undisputed gas supplier for the European market which in turn brought major energy security issues. The possibility of Russia to use its natural gas exports as a foreign policy instrument and international pressure create concern for European diplomacy. These concerns were justified in January 2006, with the crisis in Russia's relations with Ukraine accompanied by the interruption of Russian gas supplies to Ukraine and as a result affected the supply of natural gas to European market[26].

These have highlighted the importance of the development of alternative energy transmission systems to the European market. In this context, the agreement of gas networks connection between Greece and Turkey signed in July 2005 has a major economic and political importance[27]. Since Turkey's natural gas network is already connected with those of Iran, Azerbaijan, Turkmenistan and Russia, linking Greece and Turkey networks means that the rest of Europe, have access to gas which comes from three major exporters of gas beyond Russia. The planned undersea connection of gas networks in Greece and Italy will mark the connection of trunk European gas network with those of Iran, Azerbaijan and Turkmenistan, which will reduce the dependence on Russia as an exclusive supplier of natural gas to the European market.

Apart from the importance of this network connection for the European economy, it is expected to positively affect the further development of Greek-Turkish economic and political relations, and economic cooperation in the region of Southeast Europe in general. The economic relations between Turkey and Greece have experienced an unprecedented boom during the recent years as a consequence of the political rapprochement between the two states from 1999 onwards and the energy interconnection between the two countries could create new economic areas of cooperation which are expected to have a positive impact not only on their economics but also on their politics.

Furthermore, the connection of gas networks in Greece, Turkey and Italy is expected to strengthen the regional geopolitical and economic role of both Greece and Turkey where the

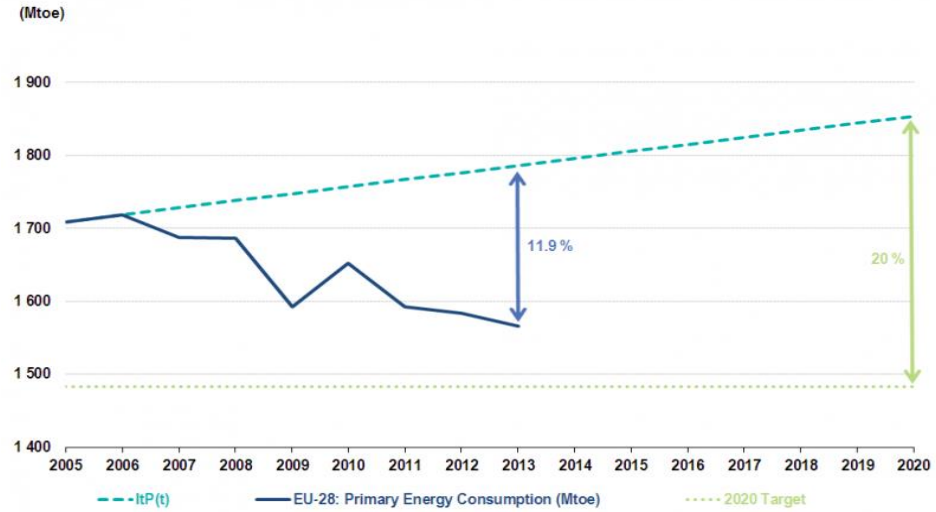
[26] Kovacebic, Aleksandar, The Impact of the Russian-Ukraine Gas Crisis of SouthEastern Europe, Oxford Institute for Energy Studies, March 2009, http://www.oxfordenergy.org/wpcms/wp-content/uploads/2010/11/NG29-TheImpactoftheRussiaUkrainianCrisisinSouthEasternEurope-AleksandarKovacevic-2009.pdf

[27] Signing the Pipeline Agreement in Rome, DESFA, http://www.desfa.gr/default.asp?pid=230&rID=370&la=2

countries will act as major transit points in trans-European energy networks. This could allow the countries to receive gas transit fees for European countries and to negotiate better energy prices for themselves and more interestingly, it could also increase their geopolitical importance bringing positive effects on their growth and competitiveness.

3.2. The European Union

Table 4.



Source: European Commission[28]

As shown in the Table 4, European energy demand is growing, especially regarding natural gas, and as a result the European Commission tries to engrave a policy that ensures on one hand the influx of maximum importing quantities of energy in the European market and on the other hand the maximum diversification of the origin of these quantities.

The Kyoto Protocol[29], a failed Protocol, aiming to reduce the greenhouse emissions is an additional parameter in the development of the European energy policy. Given the significant increase in energy demand, EU started implementing policies in order to achieve the highest

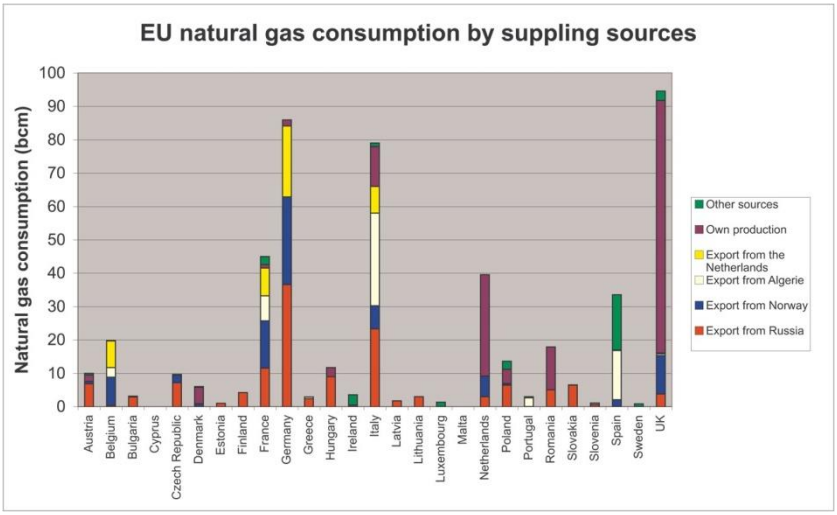
[28] EU 28 Primary Energy Savings, European Commission, http://ec.europa.eu/eurostat/statistics-explained/index.php/File:EU28_Primary_Energy_Savings_-_2012.png

[29] Kyoto Protocol to the United Nations Framework Convention on Climate Change, United Nations, 1998, http://unfccc.int/resource/docs/convkp/kpeng.pdf

energy security. The main focus was on reducing the energy dependence on Russia by increasing gas imports from North Africa and the Caspian.

The Green Paper of March 2006 stated clearly that each member state of the European Union should select the optimum energy mix, stressed that the choices of a Member State inevitably have an impact on the energy security of its neighbors and the Community in general. Hence, the Green Paper proposed the preparation of the Strategic EU Energy Review which could offer a clear European framework for national decisions on the issue of determination of the optimal combination of energy sources. Furthermore, a solid external energy policy was planned considered as a prerequisite to ensure a sustainable, competitive and secure energy. The Member States were to show their commitment to finding common solutions to common issues. The effectiveness together with the consistency of this common external energy policy would be a function of the legislative progress at the national level and the creation of the internal energy market.[30]

Table 5.



Source: The Week[31]

[30] European Commission, EU Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy (Brussels: European Commission, 2006)
[31] Weber, Peter, How the West can Peacefully Push Putin out of Ukraine, The Week, March 3 2014, http://theweek.com/articles/450008/how-west-peacefully-push-putin-ukraine

Member States should apply diversification strategies and develop a common approach towards the exporting states and the transportation routes. As shown in the Table 5, European Member States still import a significant amount of natural gas from Russia, and Ukraine gets more than half of its supply from there. New natural gas transport routes are necessary, mostly from the Caspian and North Africa in order to diversify the supplies and sustain a high level of energy security. Priority was given to the completion of network infrastructure, east-west, and north-south, and to the creation of infrastructure for the use of LNG.[32]

After the repeated crisis on Russian-Ukrainian relations on the issue of gas prices, the wider issue of energy security in the sense of ensuring the continuous and smooth supply of natural gas in the European economies has become an obvious priority. From 2006 onwards an increased importance has given to the issue of supply. The political strengthening of Russia during the Putin presidency is apparent while it also reinforced the bargaining power of Gazprom in particular against the new markets and new customers. It is therefore not surprising that the unresolved until today friction in relations between Ukraine and Russia on the issue of gas has alarmed the multifaceted markets and the European Union is now anticipated to make important decisions in order to secure its energy supply.

As a result, the significance of pipeline networks connecting Greece and Turkey is crucial. The European Commission promotes projects linking the two countries since they serve the European purpose of increasing the natural gas volumes available for the European market as well as of reducing the dependence from Russia, as the pipelines will carry non-Russian gas. Having access to Azeri, Turkmen as well as Iranian gas increases the political influence of Europe in the region.

Furthermore, the Greek-Turkish natural gas networks projects could positively change the diplomatic relations between Greece and Turkey, a European member state and a candidate member state accordingly. The long-lasting tensions in Greek-Turkish relations were often creating issues for the Europe. The failure of the EU on establishing good relations with Turkey due to the Greek veto limited the European Regional Policy towards Caucasus, Central Asia and

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[32] European Council, The European Council's Action Plan, 23-24/3/2006 (Brussels: European Council, 2006), pp..1-2

the Middle East. The normalization of the relations, allowed and economic cooperation between the two states in strategic projects for the European Energy Security.

3.3. The Greek Energy Market

With a population of 11.28 million, Greece's energy production is around 0.403 quadrillion btu[33] in total and its energy consumption is around 1.243qbtu in total. The Greek energy sector is described, in general, by the existence of limited domestic resources, causing an almost complete dependence on external energy resources.[34] This limited domestic capacity increases the dependence on its suppliers and the need for energy mix diversification.

The major natural gas suppliers of Greece, as shown in Table 1, are Russia, Turkey and Algeria (through LNG). The contract of DEPA with Russian Gazprom guarantee the supply of the Greek market with 2.8 bcm of gas per year until 2016 delivered at the point of Strimonohori Sidirokastrou, near the Greek-Bulgarian border. Overall since 1996 it is estimated that initiated gas imports from Russia are more than 30 bcm meaning the 1.85% of total exports of Gazprom in Europe.[35] The contract with the Turkish BOTAS agree for the supply of up to 0.7 bcm of gas annually by 2021. These quantities are delivered in Ebros' Gardens through the existing Greek-Turkish natural gas pipeline (ITG). Likewise, the contract with Sonatrach regarding LNG supplies ensures the supply of the country of up to 0.7 bcm per year until 2021, delivered at the storage and regasification station at Revythoussa bay of Megara. Moreover, DEPA purchase quantities of LNG from the global spot market at competitive prices in order to ensure adequate supply of the Greek market in increased demand cases.[36]

The largest share of gas consumption in Greece today concerns the production of electricity from thermal power units fueled by natural gas. During the following years, this tendency will continue, as will the inclusion of new units and the supply continuation of the

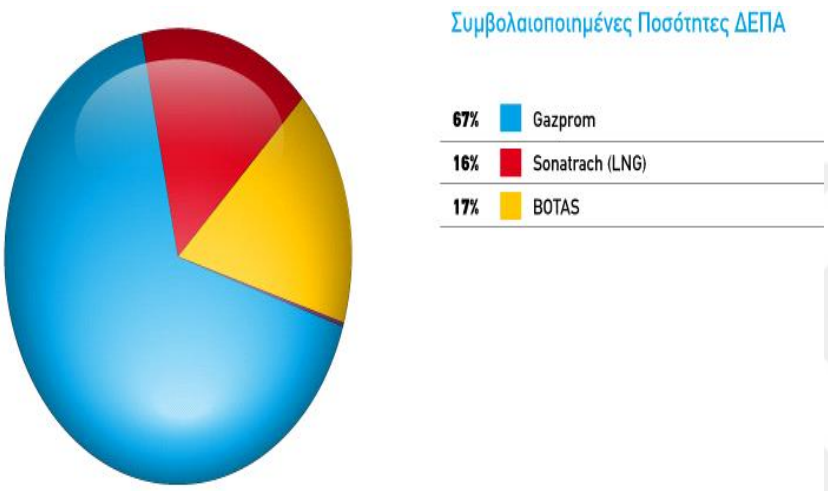
[33] Energy is measured under qbtu while natural gas is measured in bcm in this paper.
[34] Greece, U.S. Energy Information Administration, http://www.eia.gov/countries/country-data.cfm?fips=gr

[35] Αποστόλου, Μάκης, Οι Μονομάχοι στην Σκακιέρα του Φυσικού Αερίου, Έθνος, Ιανουάριος 2013, http://www.ethnos.gr/article.asp?catid=22770&subid=2&pubid=63769118

[36] Προμήθεια, ΔΕΠΑ, http://www.depa.gr/content/article/002003006/160.html

existing ones. Considering that the economic crisis will complicate the achievement of long-term and short-term objectives in the energy sector due to further contraction in the economic activity and limit the availability of renewable energy projects, the evolution of natural gas as a means of electricity generation is quite positive.

Table 6.



Source: Greek Natural Gas Supplies, DEPA[37]

With the LNG revolution taking place in the world, the negotiating dynamics of Europe will strengthen to the maximum extent and in this case, Greece becomes an ideal market through which can be transited LNG from Southeast Europe to Central. To this end, LNG terminal of Revythoussa with the second upgrade that is expected to be completed by 2016 will be the best solution as the closest gateway to the Balkan Peninsula and as a result, the support in the development of the Southern Corridor should continue to be a strategic choice of Greece.

Creating a leadership role in the energy developments, the recognition of Greece as one of the most credible player in the region, and the strengthening of the diplomatic relations with European and other partners, should be strongest incentives of the National Energy Planning of Greece. The expansion of the state and the preservation of monopolies which are practical ineffectiveness recorded history. The implementation of transcontinental, transnational and

[37] Προμήθεια, ΔΕΠΑ, http://www.depa.gr/uploads/images/promitheia_chart.jpg

national major projects, which become reality after decades of negotiations, could have important positive effects for the Balkan region.

Taking into account the specific characteristics of each Southeast Europe market, which are characterized by a high dependence on Russian gas supplies and partial implementation of the third energy package, aiming for the further liberalization of the European natural gas market while changing numerous directives an regulations[38], investments in energy infrastructure will be a key enabler of market liberalization and a foundation for their future integration Such projects are the Trans Adriatic Pipeline (TAP), the Interconnector Greece - Bulgaria (IGB), the Interconnection Bulgaria - Romania, future Interconnection of Greece and Skopje and the possible construction of new LNG terminals in North Greece.

The regional role of Greece in ensuring the smooth supply of the Balkan countries (Bulgaria, Romania, Serbia, Croatia, Albania, and FYROM) will be pivotal. The geostrategic position of the country (being the first in line of importing natural gas from the East) and its reform progress in relation to neighboring countries, support its role as a suitable Gas hub.[39]

Greece's geographic location, between the major gas exporters in the Southern gas corridor in the Caspian, Mediterranean and Middle East to gas importers in Southeast and Western Europe, signifies what a crucial role could play in the discussions for a number of international gas pipeline projects including IGB, ITGI, East Med, TAP and South Stream.

3.3.1. The Current Greek Context

Greece's position as a regional energy player has deteriorated as a result of the ongoing fiscal crisis and the general economic plunge. Some major gas pipelines projects where Greece was involved, including the ITGI and the south route of the South Stream, have been renounced while a territorial friction with Albania is blocking the TAP project from moving ahead.

[38] Yafimava, Katja, The EU Third Package for Gas and the Gas Target Model :Major Contentious Issues Inside and Outside the EU, The Oxford Institute for Energy Studies, April 2013, http://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/04/NG-75.pdf

[39] Ξιφάρας, Κώστας, Ανδριοσόπουλος, Κώστας, Άποψη: Ενεργειακή Γεωπολιτική και Εξελίξεις στο Φυσικό Αέριο, Η Καθημερινή, Δεκέμβριος 2014, http://www.kathimerini.gr/794902/article/oikonomia/ellhnikh-oikonomia/apoyh-energeiakh-gewpolitikh-kai-e3eli3eis-sto-fysiko-aerio

Moreover, due to the negative economic aura and the high country risk involvedsome other gas related projects have been put on hold.

However, as Greece is anticipated to finally overcome the present economic impasse with a return to economic growth in the following decade, the gas projects bypassing through its territory, could bring an interest from an investment point of view and they are of strategic importance for Greece's economy as well as crucial regarding national and regional energy security. Energy-related projects can be influential in Greece's attempt to rebuild its image, establish a dominant and strong regional role and in the long-term stimulate its economy.

Despite the economic crisis and its impact on the Greek economy, some current progress and notable reforms in a few sectors of the economy have placed Greece on a new course and have retain energy at the foreground of its economic recovery. New legislation, privatizations, investment incentives, and an emphasis of Greek energy projects by the European Commission frame the current picture of energy in Greece and have kept the interest on investments in the energy sector. What defines the Greek energy market today, are the actions taken by the government to simplyfy the regulatory framework and to conform to the European directives on the liberalisation of the market, along with the large scale investments opportunities in energy. Though, an evaluation of the impact of the crisis on Greek foreign policy would come to the end that the country's image and credibility have been devastated and its influence both in the EU as well as in its neighbourhood has been negatively overblown. The economic means available to perform foreign policy have been considerably decreased. The Greek government have decided to significantly reduce defence expenditures and, under these conditions, the country s participation in international peacekeeping and other operations have already been shrinked.[40]

By any means, Greece foreign policy should again focus for a solution in the Cyprus issue, intesifying its diplomatic attempts for the delmination of its EEZ according to the provisions of UNCLOS and by doing so, the country could open up more opportunities regarding natural gas projects in the Eastern Mediterannean.

[40] Dokos, Thanos, Greek Foreign Policy Under the Damocles Sword of the Economic Crisis, Konrad Adenauer Stiftung, Spril 2014, http://www.kas.de/wf/doc/kas_40897-544-2-30.pdf?150430114239

Even if energy policy seems to be in the core agenda of the Greek government, it does not appear to be a major priority for the country in order too boost its competitiveness in the sector across the region as it is for Turkey. The realization of the natural gas projects bypasssing Greece is moving at a slow pace since decisions are moving back because of the country s focus on its fiscal crisis.

In the question of whether natural gas politics are of main focus of Greece in times of crisis, the Division of Strategy, Business Development and Regulatory Affairs of DESFA stated that ¸

> *"Energy Policy is exercised by the Greek Government. DESFA´s role is not of exercising policy; however it implements energy infrastructure projects under the national energy strategy. The economic crisis has affected the natural gas market, but as the major energy infrastructure projects have a long-term application and are interconnected with other markets (such as gas transit projects) and simultaneously financed from European funds, the implementation of them goes smoothly."*[41]

3.4. The Turkish Energy Market

With a population of around 76.7 million Turkey is one of the largest markets worldwide. Its total energy consumption amounts around 5.5058 qbtu while its total energy productions was around 1.379 qbtu in 2013.U.S. Energy Information Administration estimates Turkish natural gas reserves at 6.748 bcm.[42] Turkey produced 0.616 of natural gas in 2012, meeting its domestic demand mostly via importing natural gas. Turkey's energy demand growth has been among the fastest in the world in 2010 and 2011 following its overall economic growth, however from 2012 until today Turkish economy has entered into a stagnation stage which nevertheless has not caused a slowdown to its natural gas consumption reaching a peak of about 45 bcm in 2012. Natural gas share of the energy mix in Turkey, is been increasing and it has surpassed oil to become the most important fuel in terms of volume consumed.

[41] The Source (that would like to keep its unanimity) from the Division of Business Development and Regulatory Affairs was interviewed on the 24th of July 2015 at DESFA's headquarters in Athens.
[42] Turkey, U.S. Energy Information Administration, http://www.eia.gov/countries/cab.cfm?fips=tu

The gas market was liberalized in May 2001, with the Natural Gas Market Law N° 4646 which obliges state-owned BOTAŞ to reduce its market share in import, wholesale and distribution.[43] However, BOTAŞ still remains a dominant gas market player while the majority of the market is now open to competition for private as well as other public companies. Natural gas is mainly used in power generation and heating, while essential amounts of natural gas are used in the industrial sector. In 2012, Turkey imported approximately 45 bcm of natural gas, with 56% of that volume coming from Russia, 18% from Iran and large amounts imported from Azerbaijan and Algeria. Most of Turkey's natural gas imports are transported via pipelines, including those from Russia, Iran, and Azerbaijan where the imports from Algeria and Qatar as LNG. The majority of Russian gas arrives in Turkey via the Blue Stream pipeline while it imported approximately 25 bcm of natural gas from Russia in 2012, 290 8.12 bcm of Iranian natural gas via the Tabriz-Dogubayazit pipeline and an additional 3.30 bcm arrived from Azerbaijan via the Baku-Tbilisi-Erzurum (BTE) pipeline in 2012.[44]

The Organization of Economic Cooperation and Development's Economic Outlook forecasts Turkey as having the fastest growing demand among OECD countries. Considering the fact that Turkish domestic natural gas demand is projected to grow fast, there are several ever more important issues that the Turkish government is faced with ensuring the country's energy security and meeting long term demand while making sure that no periodic supply shortages occur during the next decades.[45]

According to BOTAS forecasts of 2012, Turkey's natural gas demand is projected to nearly double from 45 bcm in 2012 to 81 bcm by 2030 with the main driver for that being the gas-fired electricity generation where demand according again to BOTAS will possibly grow to up to 45 bcm/year by 2030. And this is regardless of the governments' aim to decrease the share of gas in the electricity generation sector from the current 45% to 30% or below, substituting gas

[43] Liberalizing Natural Gas in Turkey, PWC, February 2014, http://www.pwc.com.tr/tr_TR/tr/publications/industrial/energy/assets/turkiyede-dogalgaz-piyasasinin-liberallesmesi-raporu.pdf

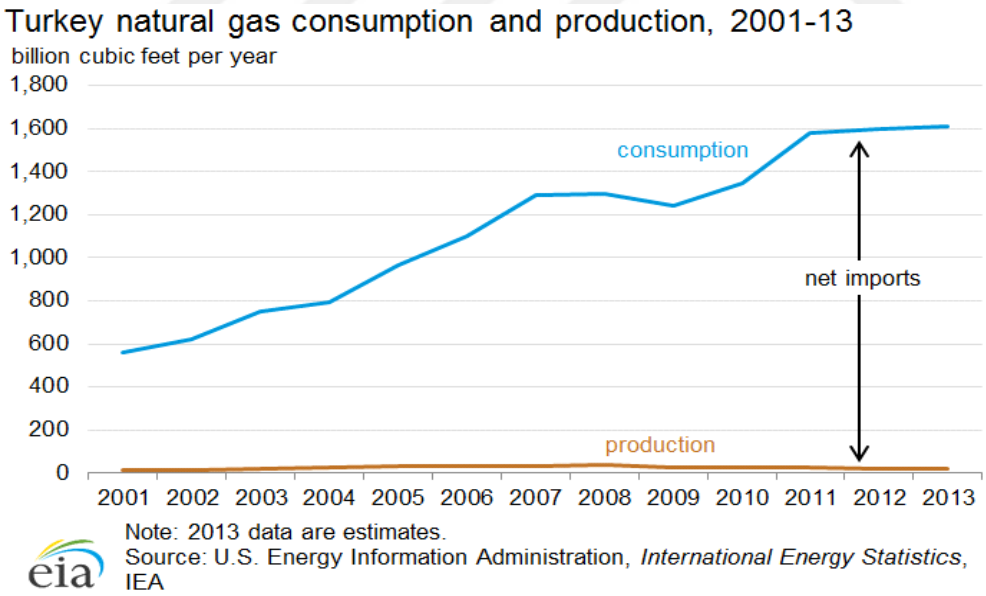
[44] Turkey, U.S. Energy Information Administration, http://www.eia.gov/countries/analysisbriefs/Turkey/turkey.pdf

[45] Rzayeva, Gulmira, Natural Gas in the Turkish Domestic Energy Market: Policies and Challenges, The Oxford Institute for Energy Studies, February 2014, OIES Paper:NG 82, http://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/02/NG-82.pdf

with domestically produced coal, lignite, renewable and nuclear. However, as demand for electricity is forecast to grow at 6-7%/year, even with only 30% of the electricity market, natural gas demand will continue to be considerable. The second feature is the household sector, where demand is projected to increase from 8-9 bcm in 2012 to 22.7 in 2030, with the industrial sector being the third feature contributing to the general natural gas demand growth, forecasted to rise from 12.8 bcm in 2019 to 14.2 in 2030.[46]

Considering the fact that Turkey's natural gas consumption, as shown in table 1 is rapidly growing and it will continue to grow following its large energy needs, since there are no significant reserves in its territory, the need for importing is apparent. As a result, the level of energy dependency on external suppliers will get even higher leading the government to place the security of its supplies as one of its main policy objectives. As it turns out, the key element for this policy is to diversify its supplies and to build solid relations with all natural gas producing countries in the region.[47]

Table 7.



Source: U.S. Energy Information Administration[48]

[46] Natural Gas Sector Report, BOTAS, http://www.botas.gov.tr/index.asp

[47] Tagliapietra, Simone, Turkey as a Regional Gas Hub: Myth or Reality? Turkish Policy Quarterly, Winter 2014, Vol.12,No:4, p.87-98

[48] Turkey, U.S. Energy Information Administration, http://www.eia.gov/countries/cab.cfm?fips=tu

Quoting the words of Turkish Energy and Natural Resources Minister Taner Yildiz from Eurasia Critic on January 2010,

> *"Turkey actively pursues multidirectional energy policies for the purpose of maintaining energy supply security for both itself and its partners. We believe that Turkey's importance lies in its capability and desire to develop main transit oil and natural gas pipelines. This is why Turkey is realizing the East-West and presently North- South Energy Corridors. The completed Baku-Tbilisi-Ceyhan crude oil pipeline, the Baku-Tbilisi-Erzurum natural gas pipeline and the Turkey-Greece interconnector illustrate Turkey's contribution to stability and cooperation in its vicinity. By creating the 'Central Asia-South Caucasus- Europe' corridor in our common interest we are intensifying our energy dialogue with the EU, and diversification projects like Nabucco have strategic importance, since they make it possible to export energy resources directly to Europe, and not only to Europe, but also to Central Asia and the Caspian Sea region."*[49]

Considering Turkey's geographical position surrounded by major gas supplies, its vision of becoming a significant energy hub is quite realistic. While a big percent of the worlds' hydrocarbons located around Turkey, the country could act not just as an energy hub but also as a key player for managing the political stability in the region.

The benefits for playing such a role are very important both in energy security as well as in economic terms. As Mert Bilgin states, 'Turkey as an energy transit corridor implies a variety of oil and gas pipelines, and other sorts of transportation, originating from Russia, Caspian and the Middle East not only for Turkish market but also for Europe and other markets via Mediterranean. Turkey in this scene, receives certain transit fees; however fails to put priority on domestic needs; is satisfied with average transit terms and conditions; and cannot re-export considerable amount of oil and gas passing through its lands. Turkey as an energy hub indicates Turkey's extensive influence on a web of oil and gas pipelines as well as LNG trade not only in

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[49] Taner, Yildiz, "Regional and Global Cooperation in the Context of Turkey's Energy Corridor and Terminal Concept", Eurasia Critic, January 2010, p.7.

terms of its ability to influence transit terms and conditions, but also to re-export some of hydrocarbons passing through this system. Compatibility between international agreements and domestic energy mix is of utmost significance to avoid negative impact of one of other and describes the level of success if Turkey appears as an energy hub'.[50]

3.4.1. The Current Turkish Context

Turkish energy policy has made great progress after the Helsinki Summit of 1999 where Turkey was declared a candidate for accession to the EU. Turkey gives big importance to a more efficient energy sector in order to encourage the competitiveness of its national economy. Considerable advancement has been attained in restructuring and liberalizing the Turkish electricity and gas markets.

Turkey s President Recep Tayyip Erdogan and PM Ahmet Davutoglu have advocated the country s role in regional affairs aggressively with a dynamic foreign policy and taking positions on some of the most important regional and global issues. With Turkey s rising political influence, the energy trading and pipeline transportation have became prominent and have a direct impact on its foreign policy.[51]

Turkish foreign policy is firmly moving away from the Cold War model, rejecting a unipolarity and creating a place for itself in international politics, especially in the energy sector.Turkey has boosted its role as a geopolitical center in recent years by developing its economy and turning its focus to regional relations. As a result, the countrys energy politics stimulate its economy, which greatly contributes to its effort for regional leadership and international power.[52]

The main focus of Ankara is to boost its competitiveness in the international political arena promoting itself as a reliable alternative transit state for natural gas. Nonetheless, some

[50] Mert Bilgin, "Turkey's Energy Strategy: What Difference Does it Make to Become an Energy Transit Corridor, Hub or Center?" UNISCI Discussion Papers, No.23, May 2010, pp.113-128.

[51] Hill, Fiona. (2004). Caspian Conundrum: Pipelines and Energy Networks. *The Future of Turkish Foreign Policy.* Eds. Lenore G. Martin and Dimistris Keridis. Cambridge, MA: MIT Press. 211-239.

[52] Free, Laura, Turkey's Energy Politics as Foreign Policy in the Twenty-First Century, American University, Spring 2012, http://aladinrc.wrlc.org/bitstream/handle/1961/10545/Free,%20Laura-%20Spring%2012.pdf?sequence=1

domestic issues that the country is facing, such as the Kurdish issue and the current political instability, create concerns about its future.

Chapter 4: The Existing and the New Routes of Natural Gas Supply

4.1. Caspian vis-à-vis Russian Capacity

4.1.1. The Importance of Russia

While the future for European energy demand is to increase, the importance of Russia as a major gas supplier becomes clear and a much closer natural gas partnership between Russia and Europe is based on solid foundations.

Given its wealth of natural resources, Russia will remain a key energy partner for the EU. Nonetheless, since the gas conflict between Russia and Ukraine in 2006, fears that Moscow could exploit Europes'energy dependence for political purposes are multiplied in Europe. In truth, the energy relationship between the EU and Russia is characterized by a high degree of interdependence. Indeed, Russia depends heavily in the European energy market. More than 60% of the gas and petroleum exports are destined for Europe, being the 60% of the Russian cash returns while Russia is also dependent on Western technology for its future transportation of energy.[53] Despite this interdependence, there is no stable energy relationship established between the EU and Russia. One issue concerns the mutual access to resources and energy markets as well as the infrastructure for the transportation of gas and oil. As the Russian state energy companies are staring to control the energy supply chains in Europe, the EU insists that the European companies should have equal access to the Russian market. However, it is unlikely that Russia will deregulate its domestic market, especially the energy transport sector.

Meanwhile, the demand by Moscow for guarantees as for the delivery contracts and the opportunities for long-term investment has consequently shifted the EU's focus on renewable energy sources and strengthen its diversification efforts. Russia has never ratified the Energy

[53] Stern, Jonathan, Natural Gas in Europe-The Importance of Russia, Oxford Institute of Energy Studies, http://www.centrex.at/en/files/study_stern_e.pdf

Charter adopted in 1994[54] regarding the multilateral trade, the transit, the investment and the environmental aspects directly related to energy, but insists that she wants to follow its basic principles. That is why the EU should negotiate on a new bilateral agreement partnership and cooperation in order to adopt these principles as well as mechanisms to settle in litigation. A corresponding agreement with Russia would give important impulses to the general efforts of the EU to strengthen the producers-transits-consumers chain by creating common control zones. But even if the negotiations are successful, the different degrees of dependence of European states on Russian gas and the competing interests for the cooperation of European energy companies with the Russian partners suggest that the EU will continue to experience difficulties to develop a common energy policy vis-à-vis Russia.

Russia has huge discovered natural gas resources available for development. The country's gas reserves amount of 48,000 bcm according to the Russian A+B+C1 classification while Gazprom estimates that it has 2,800 bcm of reserves in fields in production or being prepared for development and as a result, it is clear that Russian reserves overwhelm all other gas reserves available to Europe with the exception of Middle East countries, which are expected to carry to Europe only in the form of LNG over the next two decades.[55]

Another strong foundation is the established infrastructure where over the past 35 years, pipeline infrastructure has been built for the delivery of significant volumes of gas from Central Asia to other former Soviet Republic countries, and from Russia to Europe. As far as Russian exports to Europe are concerned, compared with the position in 1973 when only four countries were supplied with less than 7 bcm of gas, thirty years later nearly 140 bcm was exported to nineteen European countries. Delivering these volumes requires a very large amount of transmission capacity. The former Soviet Republics play and important transit role in this trade with the majority of Russian gas exports to Europe passing through Ukraine from where a number of pipelines travel west, delivering gas to central and northern Europe. Some lines travel

[54] Energy Charter Treaty and Related Documents, Energy Charter Secretariat, 1994, http://www.encharter.org/fileadmin/user_upload/document/EN.pdf

[55] Stern, Jonathan, Natural Gas in Europe-The Importance of Russia, Oxford Institute of Energy Studies, http://www.centrex.at/en/files/study_stern_e.pdf

south through Moldova to South Eastern Europe and Turkey and others pass through Hungary delivering to the Balkan countries.[56]

It is of common belief that Russia will continue to be Europe's primary energy supplier, especially regarding natural gas supplies, for the next upcoming decades and Europe will remain the primary market for Russian natural gas exports. Consequently, the central goal of Russian energy companies has been to try to make their power stronger of Europe's energy sector by establishing long-term bilateral supply contracts with some European countries such as Germany, Italy, and Bulgaria, and by buying stakes in European energy distribution networks and storage facilities.[57]

4.1.1.1. The Russian Influence

It seems that Russia would like to preserve a zone of interest in the Baltic region and post-communist Europe, generally regardless of the involved countries desires. In softpower terms, Russia tries to form networks connected with common interests in order to promote its objectives using its capability to incorporate using cultural and political standards as well as the accordant business cultures that still exist in certain areas.

Russia's soft power in these areas has been based on the appeal of Soviet and Russian culture since the 2000s. Its influence is noticeable in culture, education and the media where the main instrument for exporting and the main facilitators to receive this culture are the language, the Russian minorities existing in these areas, the Soviet legacy and the established business networks. The Russian language continue to be an important instrument for expanding Russian influence, where most of the people educated before the collapse of the Soviet Union speak Russian as their first foreign language.

Despite the generally successful transformation of Estonia, Latvia and Lithuania to market economies, their political systems continue to be linked with institutional weaknesses such as rupture and commercialization. This is a fact that makes them extremely exposed to

[56] *ibid*

[57] Ratner, Michael, Europe's Energy Security: Options and Challenges to Natural Gas Supply Diversification, Congressional Research Service, August 2013, https://www.fas.org/sgp/crs/row/R42405.pdf

corruption and Russian influence. Furthemore, the substantial Russian minorities in these counties have been a crucial parameter giving the chance to Russia to successfully set up nexuses based on common language, values and interests.[58]

The spread of Russian politics into the business interests, is another enabling factor for Russian influence. These states have minor economies that are still reliant on Russia for exports and energy, corruption and shortage of transparency in their political life are common so the impact of business interests becomes more remarkable.

When it comes to Central Asia, Russia has modified its policies to boost its strategic interests including keeping the region within its sphere of control and away of impact of the Islamic states of the south, being able to have access to strategic raw materials and energy supplies and preserving the control of crucial military and technical facilities.[59]

The major Russian perception is this of the post-Soviet space as being a Russian sphere of influence essentially have not changed since the Yeltsin era. Energy is of central importance for the Russian leadership and more specifically, natural gas mark a political goal where preserving the monopoly on the pipelines of natural gas to Eastern and Central Europe is at the center of Russia's national security policies. The importance of natural gas for Russia's foreign policy is, the result of a fundamentally weak economy that is reliant on the export of hydrocarbons, as well as the result of Russia's strategic aim to secure its traditional sphere of influence.[60]

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[58] Grigas, Agnia, Legacies, Coercion and Soft Power: Russian Influence in the Baltic States, Russia and Eurasia Programme, Chatham House, August 2012, http://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Russia%20and%20Eurasia/0812bp_grigas.pdf

[59] Hill, Fiona and Jewett, Pamela, Russia's Intervention in the Internal Affairs Of the Former Soviet Republics and the Implications for United States Policy Toward Russia, John F.Kennedy School of Government, Harvard University, January 1994, http://www.brookings.edu/~/media/research/files/reports/2014/03/back-in-the-ussr-1994-hill-jewett/back-in-the-ussr-1994.pdf

[60] Adomeit, Hannes, Russia and its Near Neighbourhood: Competition and Conflict with the EU, Natolin Research Papers, College of Europe, April 2011, https://www.coleurope.eu/system/files.../research-paper/adomeit_0.pdf

4.1.2. The Caspian as an alternative

Despite these projections, with the events of the mid- and late 2000s,where many European countries suffered numerous unpredicted energy cutoffs due to arguments between Russia and the key pipeline transit states of Ukraine and Belarus over natural gas supply and transit issues, Europe became skeptical for its dependency on Russian gas. At the beginning of 2006, a Russian-Ukrainian dispute had led to a natural gas cutoff to Europe where in 2009, Gazprom stopped all natural gas supplies transiting Ukraine for almost three weeks after the two sides failed to reach agreement on several issues, including a debt supposedly owed by Ukraine to Gazprom and the price that Ukraine would pay for natural gas supplies. In 2010 and 2011, disputes between Russia and Belarus over a number of issues, including energy prices, debts owed by Belarus, and transit fees paid by Russia for the use of Belarusian pipelines, led again to temporary reductions of oil and natural gas supplies to Belarus and neighboring countries.[61]

As a result, European countries started considering different supply options as well as different routes in order to avoid these problematic situations. The Central Asian region holds great potential to produce more natural gas than it currently does, and given its proximity to Europe, it presents possible alternatives to Russian supplies. Central Asia has been a focus of U.S. and European efforts to provide Europe an alternative to Russia for natural gas through the southern corridor. The Caspian region has emerged as a considerable source of natural gas for world markets while the proven natural gas reserves of Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan are projected among the largest in the world. The International Energy Agency (IEA) estimates that the Caspian region's natural gas reserves are about 7% of the world's reserves, but also argues that further exploration could result in an upward modification of estimated reserves[62].

As discussed, the main focus of the EU is on reducing the energy dependence on Russia by increasing the gas imports from North Africa and the Caspian Sea. The "Green Paper" of March 2006 noted clearly the issue of supply as well as that each member state of the European Union could select the optimum combination of energy sources (energy mix), stressing that the

[61] *ibid*
[62] World Energy Outlook 2010, International Energy Agency, http://www.iea.org/textbase/npsum/weo2010sum.pdf

choices of a Member State inevitably have an impact on the energy security of its neighbors and the Community in general, as well as on competitiveness and the environment. As a result, the "Green Paper" proposed the preparation and submission of a "Strategic EU Energy Review" which could offer a clear European framework for national decisions on the issue of the determination of the optimal combination of energy sources.[63]

The Caspian Sea region is one of the oldest oil-producing areas in the world and it gradually becomes a very important source of global energy production. The region has significant oil and natural gas reserves from both offshore and onshore fields in the Caspian Sea and basin. Even though it is traditionally an oil-producing area, the Caspian area's importance as a natural gas producer is increasing quickly. Very substantial gas reserves have also been established in the countries of Central Asia and the Caspian region. Turkmenistan and Uzbekistan each produced well over 50 Bcm of gas in 2003. Kazakhstan and Azerbaijan both have rapidly developing gas industries which will be based on gas production associated with oil, as well as non-associated gas.

The discovery in 1999 of the Shah Deniz gas field of Azerbaijan in the Caspian Sea increased the prospects that the Caspian region could become a profitable region for gas exploration and development and it was roughly the same time that the broad concept of a Southern Gas Corridor was being developed by the European Commission (EC). The EC identified the Caspian as a key region for its strategy to diversify its energy supplies. These established the EC's target to link the gas reserves of the Caspian and Middle East to the European markets, and started promoting the Southern Gas Corridor project.

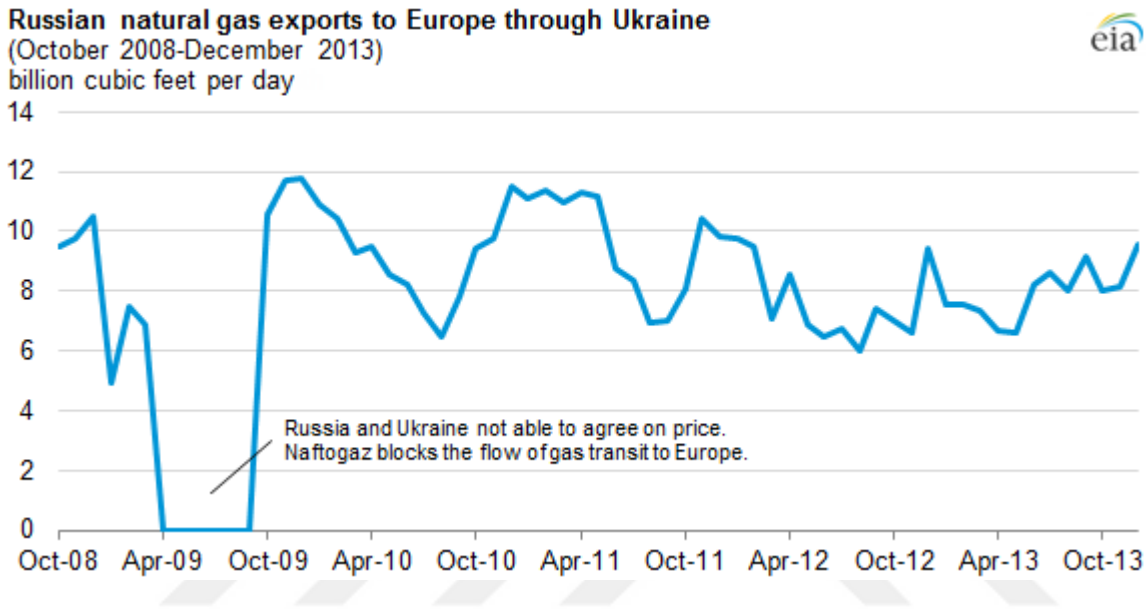
However, the Caspian states remain geographically isolated from the world markets and natural gas pipelines must be built long crossing several countries, increasing the political and economic risks. Those pipelines which head westward must cross either the Caspian Sea, where the littoral states continue to argue over its legal status and pass through energy Russia or Iran, or across Turkey and in some cases Greece.

[63] European Commission, EU Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy (Brussels: European Commission, 2006), http://europa.eu/documents/comm/green_papers/pdf/com2006_105_en.pdf

4.2. The New Routes

4.2.1. Bypassing Ukraine

Table 8.



Source: EIA[64]

The importance of Ukraine as a transit for Russian gas is apparent and shown in Table 8. Ukraine transports Russian natural gas in 18 European countries, Austria, Bulgaria, Bosnia-Herzegovina, Greece, Italy, FYROM, Moldova, Romania, Germany, Poland, Serbia, Slovakia , Slovenia, Hungary, France, Turkey, Croatia and the Czech Republic. It is the shortest route for Russian and Central Asian gas towards the European market.[65] The geostrategic position of Ukraine as the main transit of Russian gas to Europe consists of a powerful weapon in the negotiations on the level of fees, on the price of energy products introduced and given the energy dependence on Russian gas, on the amounts retained for internal use.

[64] Metelitsa, Alexander, 16% of Natural Gas Consumed in Europe Flows Through Ukraine, U.S. Energy Information Administration, March 2014, http://www.eia.gov/todayinenergy/detail.cfm?id=15411

[65] Energy Delta Institute, "*Ukraine*", http://www.energydelta.org/mainmenu/energy-knowledge/country-gas-profiles/ukraine#t57954

However, the comparatively smaller bargaining power towards Russia, due to the extensive dependence of Kiev from Moscow (mainly economic and energy wise), combined with the domestic political instability -the polarization climate between the governments and competitors thereof; have led the country's leadership into question the terms of the existing agreements as unprofitable and into the adoption of a renegotiating policy. This effort, in fact, was accompanied by mishandling and led to crises in the past with dramatic results for all parties.

At the same time, Ukraine provides a range of an unreliable transit feature, such as political instability and strong dependence and interconnection of government to benefits accruing as a transit. In this case, Ukraine seeking to over-exploit its transit role, it risks on losing him. The desire to renegotiate the terms of the contract with Gazprom impinges on Russian energy policy goals. Russia having connected its foreign policy, where energy is of major focus, with its internal reconstruction and development, aims to increase the prices of energy products. Moreover, the inability to resolve the dispute without interrupting the transport of gas pushed both Russia and the European countries to design bypassing Ukraine routes. Therefore, Ukraine may face a reduction in precious revenues from the transit and lose its bargaining advantage based on its geographical location.[66]

In addition, the Ukrainian leadership has failed to exploit the transit role because it was not accompanied by a successful energy and development policy within the EU. The country somehow failed to approach its objectives, namely to reduce its energy insecurity and dependency on Russian energy and financial resources. Moreover, Kiev could not properly deliver to develop other lucrative policies to modernize its network and infrastructure, improve its energy efficiency, open up the energy market to competition, increase energy prices, save resources and attract investment and also it could not successfully develop an alternative network of alternative supply sources.[67]

[66] Ukraine lost reputation of reliable gas transit country, Sputnik International, October 2011, http://en.ria.ru/world/20111019/167874442.html

[67] International Energy Agency, "*Non-member States: Ukraine*", http://www.iea.org/countries/non-membercountries/ukraine/

4.2.2. The Role of Greece as a Transit Country

Greece's location is considered advantageous for connecting Europe with the Caspian energy supplies and could meet the requirements for being a reliable transit. The Southern Corridor constitutes a viable, economical and safe alternative transit route of Azerbaijani gas that could achieve the diversification needed for Europe and break the Russian monopoly. The rapid increase in energy demand as well as the increase of the share of natural gas as a fuel for the European domestic energy consumption and the forecasts arguing that the European energy demand will overlap the supply in the long term, do not leave room for doubt for the importance of large gas supplies to the European market. The contribution of Athens has beyond its obvious contribution to the European energy security, great political importance and benefits for the country itself. Except the financial benefits that Greece could have, it will be able to increase its negotiating power within the Union which is particularly useful in this difficult period of economic crisis.

For the question of whether Greece could be a reliable transit, the country is an old member of the European family (the 10th member), it is a democratic country with a stable political life and a peaceful and cooperative behavior in the periphery. At the same time, Greece has a developed, open and competitive energy market, diversified in terms of imports. Located near the crossroads of three continents (Europe, Asia and Africa), it is an integral part of the Balkans and is also in close proximity to the Black Sea. The Aegean Sea is a significant shipping route, connecting the Black Sea with the Mediterranean where energy products are trading every day. [68]

Nonetheless, Mr. Nikolaos Christodoulidis, Counsel A of Economic and Commercial Affairs of B7 Secretariat for Energy Issues at the Greek Ministry of Foreign Affairs argued that

> *"Greece could not really strengthen its position in the EU while joining the SGC project, meaning that it does not gain more power in the EU. When pipelines are crossing a territory, there are some economic benefit through taxation and fees. TAP is of course an important project for Greece that*

[68] Dokos, Thanos, Tsakiris, Theodoros, A Strategic Challenge:The Role of Greece at Europe's Southern Gas Corridor Strategy, ELIAMEP policy paper, http://www.eliamep.gr/wp-content/uploads/2012/02/policy-paper.pdf

place the country into the energy sphere and the energy map but it does not necessarily boosts its position in the EU and consequently it does not strengthen Greece's negotiating position within the EU. It is important that Greece could become a transit state but it needs more pipelines than just TAP in order to be able to justify this role."[69]

4.2.3. The role of Turkey as a Transit Country

Ankara, favored by its geographical position, seeks to reap the maximum benefits through its energy policy. It aims to become an energy hub and one of the larger regional powers. A bridge that unites the East and the West and the North with the South.[70] The existence of several gas pipelines in Turkey, paves the way for the country to become a major transit for large amounts of supplies from the East to the West. The increasing demand for natural gas has led to the creation of significant pipeline infrastructure in the country. Furthermore, the country has achieved high diversification in its energy supplies, reducing its dependence on Russia. Ankara was for a long time covering its energy needs with Russian natural gas. The network connection with the Iranian natural gas network was the first attempt to reduce its energy dependence. Besides the important economic benefits, Turkey wishes to gain influence in the region in order to promote its political goals.[71] Indeed, through its transit role, it can contribute to the stability and prosperity of the region as well as in Europe's energy security of supply enjoying EU together with US support. Furthermore, the pipelines of Baku-Tbilisi-Ceyhan (BTC) and Baku-Tbilisi-Erzurum (BTE) have already give Turkey the opportunity to strengthen its relations with the states of the Caucasus and Central Asia, help on their transition to a market economy and to enhance stability in the region by contributing to the independence of the foreign and energy policy of those States which are under Russian influence.[72] Turkey is a strong

[69] Counselor Christodoulidis was interviewed on the 1st of August 2015 via Skype Call.
[70] Babali Tuncay, "The Role of Energy in Turkey's Relations with Russia and Iran", Center for Strategic and International Studies, 3/2012, http://csis.org/files/attachments/120529_Babali_Turkey_Energy.pdf

[71] Krauer-Pacheco Ksenia, "Turkey as a Transit Country and Energy Hub: The Link to Its Foreign Policy Aims", 10/2011, http://www.forschungsstelle.uni-bremen.de/UserFiles/file/fsoAP118.pdf

[72] Haydar EFE, "Turkey's Role as an Energy Corridor and its Impact on stability in South Caucasus", http://www.usak.org.tr/dosyalar/dergi/rHs1uy5VFvZZz5RQBgHvskJVO FU8cR.pdf

regional player. Given the fact that, it is consistent with its obligations in an international level, it can be seen as a reliable transit.

The geographical position of Turkey at the crossroads of Central Asia, Middle East and Europe, between the oil and natural gas producing countries in the East and consumer countries in the West, gives it a major geostrategic role. In 2006 and 2007, the Baku-Tbilisi-Ceyhan (BTC) and Baku-Tbilisi-Erzurum (BTE) oil pipelines that channeled the Caspian resources to the international markets, made Turkey an essential player for the diversification of supply routes to the European Union. Today, the TANAP project, which runs through Turkey from east to west over a distance of 1810 km, is the most important section of the Southern Gas Corridor. In view of changing alliances and rearranging the region, Turkey has to simultaneously deal with its social and internal issues as well as strengthen its role as a pivotal state in regional and energy security, and also deal with the polarization of its alliances, first with Russia that turns away from the European Union and seeks new economic partnerships, and also with the countries of the EU who turn to the resources of the Middle East and Central Asia to reduce their energy dependence vis-à-vis Russia.[73]

When it comes to Greece, DESFA argues that

> *"the existence of gas supplies 'liquidity' to Turkey, would benefit Greece as a gas gateway to the European Union."*[74]

4.2.4. Greek-Turkish Cooperation under Absolute and Relative Gains

Cooperation occurs in circumstances that hold a mixture of conflicting and complementary interests.In these circumstances,cooperation occurs when participants adapt their way of behaving to the true or expected preferences of others.

Numerous divergent games take place in world politics,including different but connected sets of actors. Occasionaly, the fact that more than one game could exist, makes it easier to obtain cooperation, but affiliated games may also create difficulties for one another. As a result, governments may have the motivation to exercise cooperation in some situations that are

[73] Turkey's Energy Strategy, Europa, http://ec.europa.eu/enlargement/pdf/european_energy_policy/turkeys_energy_strategy_en.pdf

[74] Division of Business Development and Regulatory Affairs, July 24th 2015

characterized by a blend of clashing and matching interests that is, in certain non-zero-sum games.In other words, cooperation can be achieved best not by supplying benefits unilaterally to others, but by provisory cooperation.

Nonetheless, the consequences of failure to cooperate, from warfare to the escalation of depressions, make visible that more cooperation is usually better than less. And, in a world where states have often been displeased with international anarchy favorable forms of international cooperation can be encouraged.[75]

Neoliberal Institutionalism supposes that states are primarily concerned with absolute gains while Structural Realism supposes that states are primarily concerned with relative gains. When states focus on relative gains, a gain for one state will tend to be seen as a loss by another and the more difficult cooperation will occur. A factor that makes cooperation difficult in an anarchic environment is that the system is characterized by a set of limitations that offer states with opportunities in which they can use relative gains to their advantage and to the disadvantage of others.[76]

When two states focus mostly on relative gains, their relations can be formed as a zero-sum game with no space for cooperation. The uncertainty that international anarchy brings cause states to worry not only about how well they progress themselves (absolute gains) but about how well they progress compared to other states (relative gains). When states are exclusively relative gains seekers, the two-actor world is relative zero-sum and cooperation is impossible. Relative gains have their greatest impact when the number of states is small or there are asymmetries among them while some realists argue that bipolarity is preferable to multipolarity because states care about relative gains.[77]

Relative gains are applicable to individual gains whereas absolute gains involve benefits obtained by all parties involved regarding their attitude towards the international community. Absolute gains concern the total influence of the decision while relative gains concerns the

[75] Axelrod, Robert and Keohane, Robert, Achieving Cooperation under Anarchy: Strategies and Institutions, World Politics, Vol.38, No.1, October 1985, pp. 226-254.
[76] Powel, Robert, Absolite and Relative Gains in International Relations Theory, The American political Science Review, Vol.85, No.4, December 1991, pp. 1303-1320.
[77] Snidal, Dancan, Relative Gains and the Pattern of International Relations, The American Political Science Review, Vol.83, No.3, September 1991, pp. 701-726.

individual gains versus others. Absolute gains undertake comparative advantages and boost the economy in general while relative gains is a zero-sum game where one state can only obtain power by benefited from others. Realists pressume the significance of Relative Gains because they think that having power over other countries leeds to more security. Liberals believe that absolute gains are significant because they think that it is crucial to make gains, not certainly to make gains over other countries.

For the case of Greece and Turkey, I consider that absolute gains are most probable to occur under a cooperation rather than relative ones. The pipelines passing through the territories of the two countries will benefit both of them in different persceptives. Turkey becoming an energy hub will boost the position of Greece as a major transit state and both will enhance the European need for alternative energy supplies and routes. Energy security cannot be achieved if there is no cooperation between the neighboring bypassing states because there has to be security in a greater view. Cooperation is not a zero-sum game for neither Athens nor Ankara, rather, it is a game that could help both achieve their goals and obtain gains.

I believe that it is a win-win game which ensures that both states can satisfy their goals in the long run. In a globalized world, the intensification of relations across borders, through increasing interaction and interconnectedness across states can bring positive outcomes to all of them. The zero-sum game can be reduced and cooperation can serve as a tool to achieve strategic goals.

In the question of whether Greek Turkish relations could be positively affected by the natural gas networks of South Eastern Europe and Eastern Mediterranean, Counsel Christodoulidis answered that

> *"they will obviously be. Turkey is a key state for the Southern Gas Corridor project of the EU that wishes to find alternative energy sources and supplies in order to sustain its energy security. The SCG will transfer Azerbaijani gas to Europe but in the long term there is the possibility for alternative suppliers to enter the game such as Iran, North Iraq and Southern Eastern Europe where all these could feed the European needs for natural gas. Whoever is the supplier, in order to transfer its natural gas to Europe via pipelines, it should pass by Turkish territory because it consists*

of the cheapest and most viable solution, except some Southern Mediterranean ones that may not do so due to political considerations. Turkey's position is a fact and we could not ignore it. Now, when it comes to its relations with Greece that is the next link, they need to in fact cooperate in order for the European supply to be feasible. Initially, two pipelines, TANAP and TAP, need to piece together and neither of the countries have any interest for this not to happen"

When it comes to competitive interests, Counsel Christodoulidis argued that

"it is questionable whether Greece or Turkey could become energy trading hubs. In theory they could be so but in practice not that easily. Competition could exist in the case of both being trading hubs but in the case that both countries serve as gas transit states there is no reason for competition to take place since the gas crossing Turkey will eventually cross Greece as well through the SGC Project. It is a win-win game and not only it would not deteriorate the relations of the countries but in fact it could further smooth them".[78]

The interests of Greece and Turkey are interconnected and as a result they can be achieved only by working together towards the same goal that is to act as reliable transit states for European Union energy security.

[78] Councel Christodoulidis, August 1st 2015.

Chapter 5: The Natural Gas Projects of South Eastern Europe

5.1. Southern Gas Corridor

Source: Natural Gas Europe[79]

The Southern Gas Corridor or else the "New Silk Road", is a proposal of the European Commission for the supply of natural gas from Caspian and Middle Eastern regions to Europe projected in the European Commission's Communication "Second Strategic Energy Review- An EU Energy Security and Solidarity Action Plan" (COM/2008/781) with the aim of improving the security and diversity of the EU'S energy supply by reaching Caspian and Central Asian gas fields.[80]

Having as its major competitor Russia's South Stream project, it is considered as one of the most complex gas value chains ever developed in the world since it is crossing seven counties, approximately 3,500 kilometers and involving numerous major energy companies with a number of separate energy projects.

The Southern Gas Corridor is also part of the Trans-European Networks of the EU aiming at the creation of an internal market and the reinforcement of economic and social

[79] Tagliapetra, Simone, Turkey as a Regional Gas Hub: Myth or Reality? Natural Gas Europe, January 2014, http://www.naturalgaseurope.com/turkey-regional-natural-gas-hub

[80] Council Conclusions on "Second Strategic Energy Review- An EU Energy Security and Solidarity Action Plan", Council of the European Union, 2009, www.consilium.europa.eu/uedocs/cms_data/docs/pressdate/en/trans/106196.pdf

cohesion. The interconnection and the development of Trans-European networks for transporting electricity and gas are necessary for the effective operation of the internal energy market as well as the economy. Users should have access to qualified services and a wider choice as a result of the diversification of energy sources, at more competitive prices. Closer links should therefore be established between national markets and the EU as a whole. With that in mind, Member States are now fully incorporated into the Community TEN-E guidelines.

TEN-E also play a critical role in ensuring the security and diversification of the supply. The connection with the energy networks of third countries (accession and candidate countries and other countries in Europe, in the Mediterranean, Black Sea and Caspian Sea basins, and in the Middle East and Gulf regions) is essential. Access to TEN-E also helps to reduce the isolation of the less-favored regions, thus strengthening the territorial cohesion in the European Union (EU).[81]

In the Trans-European Networks Energy program (TEN-E), the EU has designated the pipelines of ITGI, TAP and Nabucco as Southern Gas Corridor Projects that could provide the necessary transportation capacity to deliver Caspian and Central Asian gas to the European market.[82]

Natural gas from Shah Deniz II through the Southern Gas Corridor is crucial for Europe for diversifying its energy supply. The EU imports slightly two-thirds of its natural gas with the consumption expected to rise in the nearby future.[83]

[81] Trans-European Energy Networks, Europa, http://europa.eu/legislation_summaries/energy/internal_energy_market/l27066_en.htm

[82] Energy Infrastructure, European Commission, www.ec.europa.eu/energy/en/topics/infrastructure

[83] Cutler, Robert, The Role of the Southern Gas Corridor in Prospects for European Energy Security, Caspian Report, Winter 2014, www.hazar.org/UserFiles/yayinlar/caspian_report/Caspian_Report_6/The_Role_of_The_Southern_Gas_Corridor_in_Prospects_for_European_Energy_Security.pdf

5.2. Interconnector Turkey Greece Italy (ITGI)

Source: IGI Poseidon[84]

The Interconnector Turkey-Greece-Italy is a natural gas transportation project planned in the agenda of the Southern Gas Corridor for the transport of Azerbaijan's Shah Deniz natural gas to the European markets through Greece and Italy. The component between Greece and Turkey was completed in 2007 while the future of the Greek Italian part is still uncertain due to the competing TAP pipeline project.

The Turkey-Greece pipeline is a 296 kilometers project starting from the city of Karacabey in Turkey to the Greek city of Komotini. The length of the Turkish division is 210 kilometers, of which 17 are under the Marmara Sea and the length of the Greek division is 86 kilometers. The pipeline diameter is 36 inches with a capacity of 7 bcm of natural gas per year.[85] As former Greek Development Minister had stated, "the new natural gas pipeline and the interconnection of the electricity systems of Greece and Turkey are the two most important interstate projects between the two neighboring countries"[86].

The agreement was signed on 28 March 2002 between the Turkish Gas company BOTAS and Greek Gas company DEPA while the intergovernmental agreement for the pipeline construction was signed on 23 December 2003 in Ankara by Greek PM Kostas Karamanlis and

[84] The Project, The Gas Corridor, IGI Poseidon, http://www.igi-poseidon.com/english/gascorridor.asp

[85] ITGI Pipeline, Edison, 20 October 2014, www.edison.it/en/itgi-pipeline

[86] Turkish-Greek Pipeline close to Completion, The Journal of Turkish Weekly, 6 September 2007, www.turkishweekly.net/print.asp?type=1&id=48224

Turkish PM Recep Tayip Erdogan. The project was completed in September 2007 and was officially inaugurated on 18 November 2007.

The Greek-Italian pipeline section- Poseidon pipeline- is a proposed project developed by Greek DEPA and Italian Edison. The feasibility study was conducted in 2003, funded by the European Commission. The memorandum of understanding for the pipeline construction was signed between the two companies on 28 April 2005 in Rome by Italian Minister Claudio Scajola, Greek Minister Dimitris Sioufas while the Turkish Minister Hilmi Guler was also present.

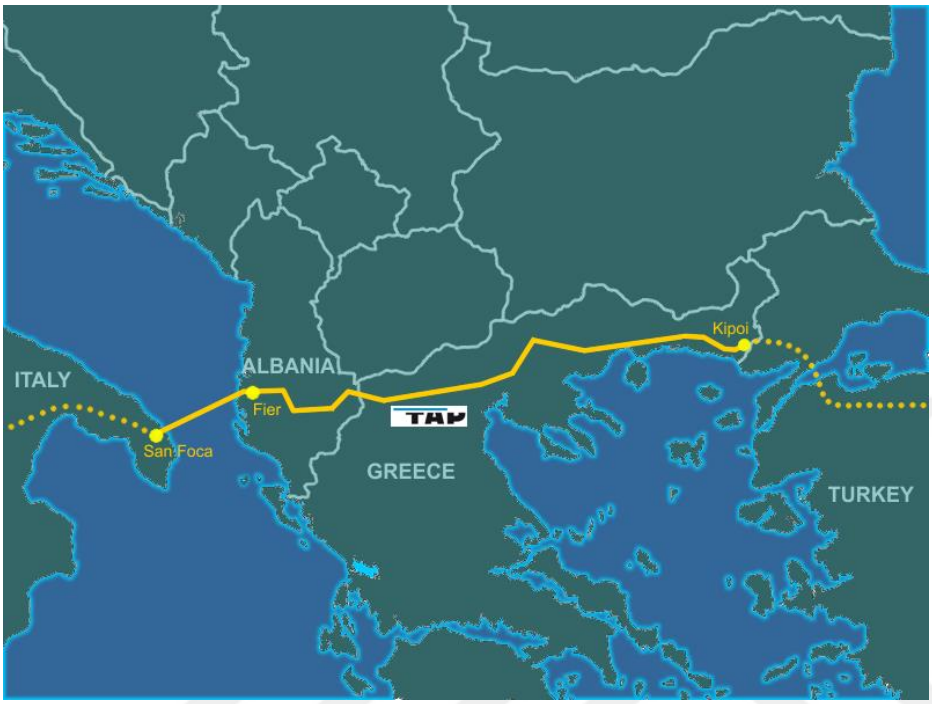
The length of the pipeline would be more than 807 kilometers of which 590 would be onshore in Greece and more than 217 off shore in the Ionian and Adriatic Sea. The capacity of the pipeline would be 8 bcm of natural gas per year, 80% reserved to Edison while 20% reserved to DEPA.[87]

The ITGI project is claimed to represent a first step in the realization of the Southern Gas Corridor, as it will enhance further development of Caspian gas resources. The European Union has recognized the strategic relevance of the ITGI project with its inclusion among the Projects of European Interests, having the highest priority within EU as well as the inclusion in the European Recovery Plan.[88]

[87] Interconnection Turkey Greece Italy (ITGI) Pipeline, Hydrocarbons Technology, www.hydrocarbons-technology.com/projects/turkeygreeceitalypip/

[88] Energy Supply Security 2014, Greece, International Energy Agency, www.iea.org/media/freepublications/security/EnergySupplySecurity2014_Greece.pdf

5.3. Trans Adriatic Pipeline (TAP)



Source: TAP[89]

Trans Adriatic Pipeline is a pipeline project to transport natural gas from the Caspian Sea through Greece, Albania and the Adriatic Sea to Italy and further to Western Europe. It was announced in 2003 by the Swiss company EGL/Axpo and the feasibility study was conducted in March 2006. Its total cost is estimated around 456.2 million Euros.[90] The pipeline starts at the Greek-Turkish border of Kipoi, Evros where it will be linked with the Trans-Anatolian gas pipeline (TANAP). The total length will be 867 kilometers of which 547 kilometers in Greece, 211 kilometers in Albania, 104 kilometers offshore and 5 kilometers in Italy. The initial capacity will be about 10 bcm of natural gas per year with the option to expand the capacity up to 20 bcm per year with the option to expand the capacity up to 20 bcm per year.[91] The consortium is

[89] Route Map, TAP, http://www.tap-ag.com/

[90] Trans Adriatic Pipeline Project, SEE Energy Week, 2nd Workgroup on South East Europe Gas Infrastructure, Belgrade October 2005, www.ec.europa.eu/enlargement/archives/seerecon/infrastructure/sectors/energy/documents/031005gas/TAP%20(03-10-2005)%20SEE%20GIW%20Belgrade.pdf

[91] TAP at a glance, Trans Adriatic Pipeline, www.tap-ag.com/the-pipeline

planning to develop an underground natural gas storage facility in Albania and offer a reverse flow possibility of up to 8.5 bcm ensuring additional energy security for Southeastern Europe.

In the beginning two options were investigated, the first one regarding a northern route through Bulgaria, FYROM and Albania, and a second one through Greece and Albania. While the southern route was considered as the most feasible one, EGL Group and Norwegian Statoil set up the joint venture Trans Adriatic Pipeline AG and began its operations. In June 2008 they signed an agreement with the Greek authorities regarding the buildup of a 200 kilometers section of the pipeline from Thessaloniki to the Greek-Albanian border. In March 2009 an intergovernmental agreement between Italy and Albania on energy cooperation mentioned TAP as a project of common interest for both counties. In February 2012, the TAP was the first project to be pre-selected and to enter exclusive negotiations with the Shah Deniz Consortium while in August, the consortium partners of BP, SOCAR and Total S.A. signed a funding agreement with TAP's shareholders. On 22 November 2012 the TAP consortium and the TANAP pipeline partners signed a memorandum of understanding establishing a cooperation framework between the parties.

In June 2013, the project was selected as a route for the gas supplies of Shah Deniz II over the competing Nabucco West project. TAP, being part of the Southern Gas Corridor is supported by the European Institutions as it is seen as a Project of Common Interest (PCI) since it will enhance energy security and diversify gas supplies. On 28 September 2012, Albania, Greece and Italy confirmed their political support for the pipeline by signing a memorandum of understanding and in February 2013, Greece Italy and Albania signed an Intergovernmental agreement[92].

For the European Union, when it comes to considering the most suitable routes that transport natural gas the need for diversification is apparent. TAP pipeline is an important step in achieving high levels of energy security. Focusing on the long term, the pipeline will not only reach the major European market centers but it has the ability to reach new markets in South

[92] Foreign Ministry announcement on the Signing of the Greek-Albanian-Italian Trilateral Intergovernmental Agreement on the Construction of the Trans Adriatic Pipeline (TAP), Hellenic Republic, Ministry of Foreign Affairs, 13 February 2013, www.mfa.gr/en/current-affairs/news-announcements/foreign-ministry-announcement-on-the-signing-of-the-greek-albanian-italian-trilateral-intergovernmental-agreement-on-the-construction-of-the-trans-adriatic-pipeline-tap-2.html

Eastern Europe and the Balkans reducing their dependence on Russia. Being an important project of the Southern Gas Corridor creates an alternative energy route while Italy offers a huge potential for delivering natural gas to Europe.[93]

5.4. Trans Anatolian Pipeline (TANAP)

Source: energy press[94]

Trans-Anatolian Pipeline is a natural gas pipeline delivering Azerbaijani gas to Europe through Georgia and Turkey. It is of strategic importance for both Turkey and Azerbaijan strengthening the role of Turkey as an energy hub.

The construction of the pipeline has elicited competition between Russia and Central Asia in terms of transit routes and pipeline strategies since it has allowed the states of the Caspian region to transport their natural gas bypassing Russia. Western Counties support Turkey as an alternative route from the Caspian and they consider it as a better and more reliable transit

[93] Belet, Nuran (2014), The Basic Parameters of European Security of Energy Supply: The Trans Adriatic Pipeline Project-TAP, European Journal of Research and Education, 2014, 2(Special Issue), 87-98, ISSN:2147-6284, www.iass.org/rs/020716.pdf

[94] Ξεκινά ο Διαγωνισμός για την Κατασκευή του TANAP, Αύγουστος 2013, http://energypress.gr/news/xekina-o-diagonismos-gia-tin-kataskeyi-toy-tanap

country than Russia.[95] According to Punsmann, TANAP is a historic project not just for Turkey but also for Azerbaijan because it will enable Azeri gas to be sell through its own pipeline system without having to pay for the transit service which would then make Azeri gas price-competitive against Russian gas[96].

As it is known, the diversification of gas supplies is of major importance in the agenda of the EU aiming in the increase of its energy security. The gas reserves of the Caspian region are an alternative to the existing sources with Azerbaijan attracting the most attention and as a result, TANAP will play an important role in European Southern Corridor energy strategy which is also supported by Washington. The frequent disruptions during the last years of Russian gas supplies to European counties have increased the concern about European energy security and have placed Turkey and TANAP in a favor position regarding transit routes.

The Project was announced on 17 November 2011 at the Third Black Sea Energy and Economic Forum in Istanbul and on 26 December 2011 Turkey and Azerbaijan signed a memorandum of understanding establishing a consortium to build and operate the pipeline. On June 2012, President Aliyev of Azerbaijan and Turkish PM Recep Tayip Erdogan signed a binding intergovernmental agreement while on March 2015 both Erdogan and Aliyev met with Georgian PM Giorgi Margvelashvili to formally lay the foundations of the project.

Azeri company SOCAR currently holds 58% stake in the project while Turkish BOTAS own 30% and BP acquired a 12% on March 2015. The capacity of the pipeline is expected to start with a 16 bcm of natural gas per year and reach up to 60 bcm in its final stage in 2026. TANAP's cost is expected to be around 10-11 billion dollars, but according to United States-Azerbaijan chamber of commerce, the project cost will increase anywhere between 3-10 billion dollars due to changes in its final route[97]. Its starting point will be Sangachal terminal in Azerbaijan, crossing through Turkish territory in the cities of Erzurum and Eskisehir and then

[95] Tugce, V.S. (2013) Importance of TANAP in Competition Between Russia and Central Asia, International Journal of Energy Economics and Policy, Vol.3, No.4, 2013, pp.352-359, ISSN:2146-4553, www.ecojournals.com/index.php/ijeep/article/viewFile/533/312

[96] Punsmann, B.G. (2012) A Step Ahead Towards the Stage of Naturation in Azeri-Turkish Relations: The Trans-Anatolian Pipeline, TEPAV, Evaluation Note, N.201236, June

[97] United States-Azerbaijan Chamber of Commerce, TANAP Cost to Increase up to $10 billion, www.usacc.org/news-a-publications/investment-news/637-tanap-project-cost-to-increase-up-to-10-billion.html

connect with the Greek pipeline network and the Trans Adriatic Pipeline(TAP) for the supply of Europe.

5.5. Interconnector Greece Bulgaria (IGB)

Source: ICGB AD[98]

Interconnector Greece-Bulgaria(IGB) is a proposed natural gas pipeline between the Greek and Bulgarian gas networks with Komotini and Stara Zagora the connecting points accordingly. The proposed capacity of the pipeline is 3 to 5 bcm of natural gas per year and the proposed pipe diameter being about 32'' and its cost around 128 million euros. [99]

On July 14 2009, a Memorandum of understanding was signed between Bulgarian Energy Holding EAD, Edison and DEPA defining the principles for development and realization of the project while in January 2011, the joint company IGB AD was registered to operate and construct the pipeline.[100]

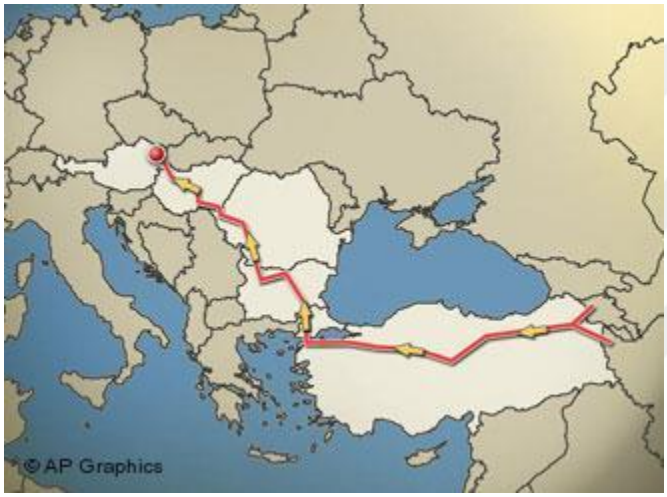
[98] Route Map, ICGB AD, http://www.icgb.eu/

[99] Gas Interconnection, Greece-Bulgaria (IGB), European Commission, www.ec.europa.eu/energy/eepr/projects/files/gas-interconnections-and-reverse-flow/greece-bulgaria-igb_en.pdf

[100] Memorandum of Understanding signed by DESFA with the Bulgarian BEH, DESFA, www.desfa.gr/default.asp?pid=228&rID=346&la=2

The project is in line with the EU strategy for market-based security of supply and part of Southern Gas Corridor. While the capacity of the project does not fully comply with SGC requirements, it could achieve a diversification of sources of supply to Bulgaria considering its reverse flow function. The agreement for the construction of the project is matched with the European Union policy on the creation of a vertically incorporated regional natural gas market in South-Eastern Europe which would have access to alternative sources of imports.

5.6. Nabucco



Source: DW[101]

Nabucco is a proposed natural gas pipeline from the Turkish-Bulgarian border to Austria aiming on the diversification of supply and of delivering routes for Europe reducing its dependence on Russia. The main supply would be Shah Deniz gas fields through the proposed TANAP. The 3,893 kilometers pipeline was to run from Ahiboz city in Turkey via Bulgaria, Romania and Hungary to Baumgarten an der March, a major natural gas hub in Austria with a projected cost of 7.9 billion euros. With a proposed capacity of 10 bcm per year with the ability to scale up to 23 bcm per year, Nabucco could meet the future increase in energy demand. The potential suppliers were considered to be Iraq, Azerbaijan, Turkmenistan and Egypt with the most dominant player being the second stage of Shah Deniz consortium. It is included in the EU

[101] Lawton, Michael, German Lobbyists Work for Gas Pipelines, Deutche Welle http://www.dw.de/german-lobbyists-work-for-gas-pipelines/a-4461363

Trans-European Energy Network programme. The first talks took place in February 2002 between Austrian company OMV and Turkish BOTAS while in June 2002 MOL Group of Hungary, Bulgargaz of Bulgaria and Transgaz of Romania signed a cooperation protocol together with the above ones. German company RWE became a shareholder in the consortium in February 2008. In December 2003 the European Commission awarded a grant in the amount of 50% of the estimated total eligible cost.[102]

The intergovernmental agreement between Turkey, Romania, Bulgaria, Hungary and Austria was signed by the five Prime Ministers on 13 July 2009 in Ankara with representatives of both the European Union and the United States. The legal framework was strengthened with the signing of the Project Support Agreements (PSAs) under the EU law in 2011 between Nabucco and each of the transit countries. On 10 January 2013, Nabucco International and Shah Deniz Consortium signed a funding agreement while on March 3 2013, they signed a memorandum of understanding with the TANAP consortium[103]. However, on June 28 2013 Shah Deniz consortium announced that it had chosen the TAP over Nabucco for its gas exports regarding Nabucco as "over"[104].

[102] Aras, Bulent, Iseri, Emre, The Nabucco Natural Gas Pipeline: From Opera to Reality, Policy Brief, 1 July 2009, SETA, Foundation for Political, Economic and Social Research, www.setav.org/Ups/dosya/7756.pdf

[103] Nabucco and TANAP sign Memorandum on Cooperation, Natural Gas Europe, 4 March 2013, www.naturalgaseurope.com/nabucco-and-tanap-sign-co-operation-memorandum

[104] TAP Clinches Azeri Gas PipelineDeal, Financial Times, June 26 2013, www.ft.com/cms/s/0/41a3c048-de4f-11e2-b990-00144feab7de.html#axzz3WGUdZWLE

5.7. South Stream

Source: Gazprom[105]

South Stream was a pipeline project to transport natural gas of the Russian Federation throughout the Black sea to Bulgaria and through Serbia, Hungary and Slovenia to Austria.Its length is about 920 kilometers with a capacity of 63 bcm per year in the Bulgarian entry point and around 20 bcm per year at the end point of the pipeline.[106]

Counsel Christodoulidis explained that

> *"while Europe said that it must comply with the European legislation, Russians decided by themselves to end this project. South Stream's ownership terms were designed without considering the 3rd energy package that prohibits being the producer and the carrier of the natural gas at the same time where an embattlement between the producer and the carrier should be established. As a result, Gazprom would not be able to act in both ways in Bulgarian territory and that's why the country claimed it could not participate in the project".*[107]

It has been a competitor to Nabucco pipeline and created controversies due to its noncompliance with the European Union competition and energy regulation such as the Third Energy Package which specifies the separation of companies' generation and sale operations

[105] South Stream Map Route, Gazprom, http://www.gazprom.com/press/news/south-stream/

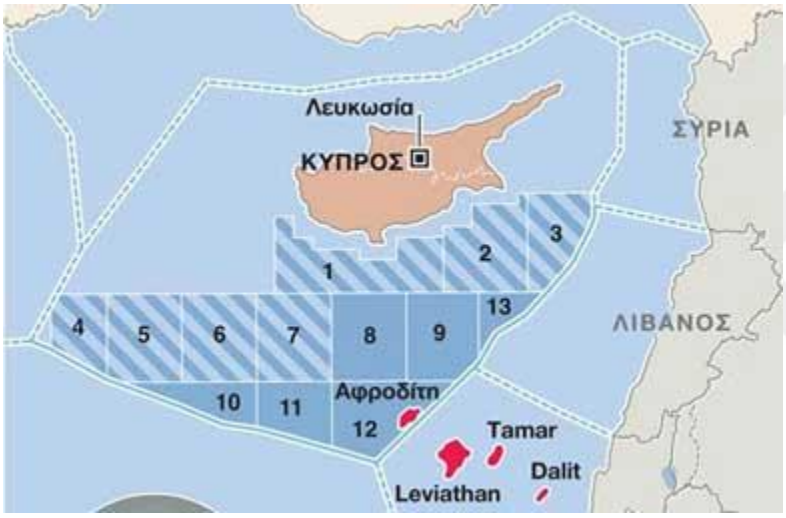
[106] South Stream Presentation, Brussels May 2011, www.south-stream.info/fileadmin/f/press/presentations/25.05.2011-brussels.pdf

[107] Councel Christodoulidis, August 1st, 2015.

from their transmission networks. The construction of the pipeline started on 2012 but was abandoned on December 2014 due to the Crimean Crisis and the imposition of EU sanctions over Russia.[108]

Chapter 6: The Eastern Mediterranean Gas

6.1. The Cyprus Case



Source: ekathimerini[109]

While the proposed natural gas pipeline projects could bring a new era of cooperation between Greece and Turkey as well as bring an added value in European Energy Security, the Eastern Mediterranean Gas findings still create a huge problematic gap into the relations of the two countries creating a strain in every cooperation attempt.

The energy wealth of the natural gas fields in the Eastern Mediterranean could rank among the largest gas reserves in the world.[110] Cooperation between Israel, Cyprus, Greece and

[108] Stern, Jonathan, Pirani, Simon, Yafimava, Katja, Does the Cancellation of South Stream signal a Fundamental Reorientation of Russian Gas Export Policy?, January 2015, The Oxford Institute for Energy Studies, www.oxfordenergy.org/wpcms/wp-content/uploads/2015/01/Does-cancellation-of-South-Stream-signal-a-fundamental-reorientation-of-Russian-gas-export-policy-GPC-5-pdf

[109] Ankara May Challenge Cypriot Use of Gas Reserves in Bailout, EKathimerini, March 2013, http://www.ekathimerini.com/4dcgi/_w_articles_wsite1_1_21/03/2013_489224

Turkey has great commercial potential nonetheless it is overshadowed by the various political disagreements dividing the region. Cyprus' unsettled division has made it unfeasible for Turkey to welcome Cypriot gas finds. In the meantime, Turkey and Israel are experiencing the worst relations in their recent history making it difficult for cooperation to occur.[111]

6.2. The Role of Greece and Turkey in the Cypriot Gas Findings

Natural Gas in Cyprus reshapes the regional energy map while creating geopolitical and energy forces that generate a number of new challenges and opportunities for each player of the region. Cypriot national sovereignty has been a topic of conflict for the last decades, and the island remains divided to its Turkish and Cypriot population. Turkey is the only country that recognizes Northern Cyprus as a legally independent state and the conflict between the North and South Cyprus has led to disagreement over who has the right to explore and benefit from potential gas reserves offshore Cyprus. Turkey claims that Cyprus should have no control over the gas findings and Ankara stands definitely opposed to exploration under the current political conditions.[112]

Nonetheless, Nicosia moved quickly to exploit its potential undersea wealth issuing licenses for hydrocarbon exploration in 2007 while in December 2011, Noble Energy discovered in offshore Cyprus, the so-called Block 12, a natural gas basin with a resource estimated at 140-220 bcm, the Aphrodite field. [113]

Turkey from its side claims that the Greek-Cypriot government in the South does not have the authority to make decisions concerning the island's natural resources and insists for the exploration to stop until the "Cyprus Problem" will be resolved. In response to the Republic of

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[110] United States Geological Survey, *Assessment of Undiscovered Oil and Gas Resources of the Levant Basin Province, Eastern Mediterranean*, World Petroleum Resources Project, 2010.

[111] Cagaptay, Soner and Evans, Tyler, Turkey's Energy Policy and the Future of Natural Gas, Harvard Kennedy School, Belfer Center for Science and International Affairs, December 2013, http://bakerinstitute.org/media/files/Research/f1cb2090/CES-Pub-Geogas-Turkey5.pdf

[112] *ibid*

[113] Will Aphrodite Save Cyprus?Natural Gas Europe, June 7 2013, http://www.naturalgaseurope.com/aphrodite-cyprus-natural-gas

Cyprus drilling program in its EEZ, the Turkish Republic of Northern Cyprus has commissioned to Turkish Petroleum (TPAO) the exploration of offshore areas in the north of the island.

Turkey seems to be isolated by the EU, The US and the Arab states since they do not sustain its position to object on the Republic of Cyprus drilling strategy. Cyprus has established political support from its neighbors and agreed maritime boundary delineations with Israel, Egypt and Lebanon as well as closer ties with Israel. In November 2012 Israel, Cyprus and Greece signed an agreement to establish working groups in order to discuss an Eastern Mediterranean Energy Corridor for the Israeli and Cypriot gas to be exported to Greece. The three main options on the table, none of them in progress so far, are the joint Israel-Cyprus LNG plant in Vassilikos, the LNG plant in offshore Israel and the East-Med Pipeline which could carry Cypriot and Israeli gas to Europe.[114]

6.2.1. United Nations Convention on the Law of the Sea (UNCLOS)

Turkey is not a party to UNCLOS. It has a territorial sea law, which generally sets the width of its territorial sea at 6NM with a clause permitting the Council of Ministers (CoM) 'to establish the breadth of the territorial sea, in certain seas, up to a limit exceeding six nautical miles, under reservation to take into account all special circumstances and relevant situations there in, and in conformity with the equity principle'.[115]

Turkey has not signed and ratified UNCLOS, mainly because of its conflict with Greece over the maritime boundaries in the Aegean Sea. The Turkish perspective is that several provisions of UNCLOS, specifically Articles 3, 33, and 121, put at risk on fundamental interests of Turkey in the Aegean. The Aegean conflict is on-going since the early 1970s and concerns a number of interrelated issues, two of which concern the width of the territorial sea and the delimitation of the continental shelf. Some other issues relate to the unresolved sovereignty and demilitarization of certain islands in the Aegean Sea, the degree of national airspace and the delimitation of 'Flight Information Regions' (FIR).

[114] Tagliapietra, Simone, Towards a New Energy Mediterranean Corridor? Natural Gas Developments Between Market Opportunities and Geopolitical Risks, Fondazione ENI Enrico Mattei, December 2013, http://www.feem.it/userfiles/attach/2013215105594NDL2013-012.pdf

[115] Act No. 2674 of 20 May 1982, on the Territorial Sea of the Republic of Turkey, http://www.un.org/depts/los/LEGISLATIONANDTREATIES/STATEFILES/TUR.htm , accessed May 12 2015

Greece and Turkey are the only coastal states separated by the Aegean Sea whose width between the mainland coasts never exceeds 400NM.The two countries continue to have overlapping maritime claims in the area. The dispute between them is further complicated by the fact that an overwhelming number of the many islands, islets and rocks (over 2,000), dispersed throughout the Aegean Sea, belong to Greece and some of these lie in very close proximity to the Turkish mainland.[116]

6.3. The Iraqi Natural Gas Case

Iraq's proven gas reserves are around 3,435 bcm, while potentially, another7,9 billion bcm have been identified and are recoverable and only a small amount of its gas production is used effectively. Natural gas can play an important role in Iraq's future, reducing the dominance of oil in the domestic energy mix.[117]

Gas is set to become the dominant fuel for Iraq's electricity industry, partly because Iraq lacks the capacity to refine enough oil to satisfy the country's electricity generation needs. The country s rising demand for electricity is critical to its national development where more power generation capacity is needed to fully meet this demand. Besides its domestic use, Iraq can potentially provide a very cost-competitive gas supply to neighbouring countries, to European markets and via LNG to Asia and in the long term there is some potential for this gas to be exported.[118]

Explorations in Iraq and most specifically Iraqi Kurdistan have revealed gas resources that could make an important contribution to the European project of Southern Corridor. These supplies, located near Turkey's hub at the southwestern port of Ceyhan are of major interest for Ankara promoting the normalization of its relation with the Nothern part of the country and suppluying its pipeline networks (TANAP) with the alternative source of Iraqi gas. The

[116] http://file.prio.no/publication_files/Cyprus/Report%202013-1%20Hydrocarbons.pdf

[117] Iraq Energy Outlook, International Energy Agency, October 2012, http://www.worldenergyoutlook.org/media/weowebsite/2012/iraqenergyoutlook/Fullreport.pdf

[118] *ibid*

European interests are also apparent since Iraqi gas can contribute to the need for alternative sources of supply promoting energy security in the EU.[119]

Natural resources allow Iraq to stimulate its economy and take on a new global role that complement its potential and the richness of its resource base. There is a strong connection between the needs of the global market regarding Iraq's production and the needs of Iraq itself for revenue to build the foundations of a modern and prosperous economy. What is more likely for Iraq is to first feed the needs of its domestic market in order to stabilize its economy and society and then to create an export strategy strengthening its relations with the West.

6.4. The Israeli Natural Gas Case

Israel's electricity system needs new capacity in order to meet the demand of its emerging economy. The country is now facing to expensive and crucial decisions on investing in new capacities in the near future. The future rise in demand, the cost and availability of supply sources, the security of supply together with the reliability and the environmental effects are issues that call for immediate solution. Israel's electricity system is working on full capacity and it will not be able to cope with the demands of its growing economy where during the last years, capacity utilization has occasionaly neared the limits of the system.[120]

Israeli LNG facilities might become targets for terrorists or enemies. The decisions that the Israeli government has to make should ensure that the country has secure, sufficient, cost-competitive supplies of electricity for the next decades. Moreover, the physical security of the system, the reliability of supply, the additional generating capacity needed to satisfy future increases in demand are also issues that need to be addressed.

Recent discoveries of natural gas offshore Israel provide the potential for the country to become energy exporter. However, the depth of the fields, around 2,000 meters, and the distance from the coast, around 100 kilometers, present technical and diplomatic challenges for which

[119] The Geopolitics of Natural Gas, Turkey´s Energy Policy and the Future of natural Gas, Harvard Kennedy School, Belfer Center, December 2013, http://bakerinstitute.org/media/files/Research/f1cb2090/CES-Pub-Geogas-Turkey5.pdf

[120] Popper, Steven, Berrebi, Claude, Israe's Energy Future: Near Term Decisions from a Strategic Perspective, RAND, 2009, http://www.rand.org/content/dam/rand/pubs/monographs/2009/RAND_MG927.english.pdf

there are no straightforward solutions. Natural gas export options are also influenced by disputes regarding the control of offshore resources, needed to be resolved within the framework of the United Nations Convention on the Law of the Sea (UNCLOS). The course of any pipeline crossing the EEZ of a country needs the approval of the coastal state.10 While the Eastern Mediterranean region presents a number of issues in terms of diplomatic recognition, in relation to UNCLOS, and agreed maritime boundaries, Israel announced its gas export policy in June 2013 proposed that 40 percent of production should be available for exporting.[121]

Another option could be an undersea pipeline to carry both Israeli and Cypriot gas to Greece where it could afterwards connect to European gas grids. Nevertheless, the distances are challenging and EEZ issue place a major drawback. The option of a gas pipeline from the Israeli Leviathan field, combined with gas from the Cypriot Aphrodite field, reaching the onshore Vassilikos LNG terminal is also under discussions. Though, Israel cannot develop its gas resources without first establishing gas export markets and concluding gas export agreements and the capacity does not yet justify the creation of Vassilikos terminal.[122]

Israel could also use its natural gas supplies as a tool to smoothen its relation with Palestine. There is a proposal for a power station to be built near the city of Jenin in the northern part of the West Bank using natural gas supplies from Israel. Moreover, it is proposed to convert the Gaza power station to natural gas fueled power station and supply it either from Israel or from the unexploited Gaza Marine off-shore gas field. The above options though need some solutions in the ongoing political problems. Neither Israel nor the Palestinian Administration wishes Hamas to benefit politically or financially from such projects. There is a potential resolution that could benefit all three. Israel would no longer be exporting electricity, for which it is not properly paid, to Gaza and the Palestinian Administration could earn royalties from the Gaza Marine gas. As for Hamas, it would assure better supplies to the citizens of the Gaza Strip. As a result, it is of major importance for Israel to use these natural gas supplies internally in

[121] Power, Susan, Preventing the Development of Palestinian Natural Gas Resources in the Mediterranean Sea, Special Report for 2014 un Forum on Business and Human Rights, Al-Haq, 2014, http://www.alhaq.org/publications/Gas-report-web.pdf

[122] Henderson Simon, Natural Gas Export Options for Israel and Cyprus, The German Marshall Fund of the United States, September 2013, http://www.gmfus.org/publications/natural-gas-export-options-israel-and-cyprus

order to sustain and strengthen its security and provide a ground for the settlement of the Palestine problem.

Conclusion

During the last decades there is an extensive discussion regarding energy. While the world faces the pressure of the possible reduced access to energy sources, which is caused by the rising demand from the emerging markets, the need for a clear energy strategy is apparent.

The changes in the energy sector are placed in the near future and have to do with the changes happening in the international economy as well as the international politics.

The redefinition of the supply, consumer powers and transit routes are crucial factors that will determine the course of the events. And while the past decade a lot has been done to increase the energy security, the real threats to global stability come not from the competition of meeting the energy needs but rather from the possibility of military response to this competition. As the energy competition create modern security dilemmas, the role that the armed forces will be asked to play in the protection of the pipelines, the terrorist attacks in the name of energy and the efforts to address these, cause the militarization of energy security.

The region that stretches from the Mediterranean Sea to the Black Sea and to the Caspian has always been and continues to represent strategic interests for the regional powers. Since the end of the Cold War, the United States, NATO and the European Union have continued to extend their influence in the entire region through regional associations, partnerships, economic and technical cooperation, infrastructure financing for the transport of energy, goods and people. The European Neighborhood Policy, the Eastern Partnership, the European Energy Community, the Peace Partnership and the Mediterranean Dialogue Initiative are examples that aim to strengthen the links between the states, from the Mediterranean Sea to the Caspian, in order to secure the borders and the interests of the European Union.

The Eurasian region has always been a challenging region and given the repeated failure of sanctions and of military interventions of the West for conflict resolution, we see that the traditional policies of economic pressure and defense no longer meet current security challenges.

With the proliferation of the geopolitical crises in the whole of Eurasia, the evolving threats which are ever more diffuse and diverse, and the complexity of the interactions between the issues of energy, economics, security challenges and state policies, we can clearly see that it is now more necessary than ever to examine new forms of alternative interventions for conflict resolution.

At the confluence of issues of geopolitical, economic, industrial, technological and environmental, often represented as a developer or as a conflict catalyst, energy could provide a solid base and a motor for a conciliation of conflicts or peacekeeping. The Southern Gas Corridor project is therefore part of the EU policy to support the relations of the rich in natural gas reserves Caspian states with the Union in the long term with Greece and Turkey playing an important role on that. Working together could lead to better results than separately and a cooperation as transit states could strengthen their relations in general.

Greek-Turkish relations were always problematic and one can argue that they will continue to be so. When it comes to energy, the question raised is why Athens and Ankara will agree to establish a cooperation considering the fact that they both have the same goal that is becoming an energy hub. It is true that there is a conflict of interests between the two countries with Turkey having already created a pipeline network in order to be able to support its goal of becoming an energy hub and Greece trying to become a strategic transit country and a future hub. Clearly, one of them can achieve its goal however this conflict of interest could be overshadowed by the mutual gains that the two countries can have by establishing cooperation. Other interests could be more important in the agenda of the two governments and in any case, in order to become a key energy transit state and energy hub there must be a degree of stability within the country as well as cooperation with the immediate neighborhood.

Greece, a member state of the European Union and Turkey, in accession negotiations with the EU, both have a common goal of achieving high levels of energy security not only for themselves but also for the Union. As previously discussed, the main goal of the European Union is to diversify its supplies and to reduce its dependence from Russia. With Turkey being the transit of the Caspian gas and Greece the state that connects Turkey with Europe, the cooperation between the two is apparent and vital. ENSEC is about establishing networks of cooperation among transit states in order for the flow of energy to be undisturbed and more secure, especially

when the interests are interconnected. Both countries, if they cooperate towards a common goal, they could become important and strong partners not only for the energy security of the EU but also for the regional security in general.

The main targets of the European Union are to achieve sustainable development, boost the competitiveness of the internal energy markets and to secure the supply chain. The security of energy supply is a very challenging target, as the EU member states are highly depended on external sources and suppliers, thus, the importance of their "energy allies" is crucial. Greece, being part of the Southern Gas Corridor together with its involvement in the energy developments in the East-Mediterranean, is placed in the spotlight of EU Energy Politics. As a result, the country is propelling herself into the position of a major leader in the gas transmission in South Eastern Europe. Greece's inner goal is not totally related to energy but to try through energy security to build a strong image and a network of allies that will consequently help her achieve its foreign policy goals. For Turkey, it has become eager in the post-Cold War era to play the role of the intermediary amongst the littoral states of the Caspian Basin, thus expanding its diplomatic influence in its immediate neighborhood and attain its foreign policy goals as well.

Regional co-operation is defined as a policy co-operation in different decision making areas between geographically proximate neighbors. The goal is to manage links, as well as create new ones. The benefits that can be reaped through regional co-operation for both Greece and Turkey are much more important than being an energy hub. As a result, their conflict of interest could become a for cooperation where both will meet major interests from their agendas. As for the EU, its Energy Policy could be better served if the states of South Eastern Europe advance their cooperation and work towards a common goal.

In an interrelated world where every state is interdependent by another, cooperation among democratic states is the key for security. Cooperation is a win-win game where the gains are distributed to all related actors. We cannot talk for energy security, especially when it comes to natural gas, if neighboring states do not cooperate considering the fact that the interconnected pipeline networks call for good relations among these states. Energy is important not just for the daily life but for the economic prosperity of a country and as a result, energy security is part of the foundations of security as a whole.

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