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Energizing Europe: The Geopolitics of Energy Security and Energy Diversification in the European Union

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SIT Study Abroad

Energizing Europe: The Geopolitics of Energy Security and Energy Diversification in the European Union

How the current state of geopolitics of supply and demand of natural gas in the European Union has forced a policy of energy diversification for the sake of energy security, and what this means for the future of energy geopolitics in the continent.

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May 2014 (Spring Semester 2014)

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Energizing Europe: The Geopolitics of Energy Security and Energy Diversification in the European Union

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Preface

Europe has always had an interesting relationship with Russia, be it social, political, or economic. From the days of the Cold War, when there was the ideological battle of communism versus capitalism, with the alliance of NATO representing a front against the Iron Curtain, certain remnants of this dynamic have still survived. Russia has not always had the best of relations with the European Union (EU), which has not made it easy for the EU to have fully functioning foreign relations with them. This is problematic specifically because of the importance that Russia has on EU energy security, as it is the largest supplier of both gas and oil to the EU. Gas in particular is a difficult issue, as Russia controls a vast amount of pipelines going to Europe that not just carry Russian gas, but also Caspian gas to the EU gas supply market. This created the situation that Russia has become empowered with one of the key elements that the EU requires for economic growth – natural energy resources.

The 2014 Ukraine Crisis was a reminder to the EU of this power that Russia holds, after Russia increased gas prices to Ukraine by more than 40%. While Ukraine is not part of the EU it did present an energy security threat. For the past decade the EU has been implementing new energy policies that are primarily directed towards energy security and energy diversification – of both the source of energy as well as the type of energy. Efforts at executing this policy have been made, and new hydrocarbon discoveries in the EU's neighboring regions of the Caspian and the Levant Basin are helping to provide alternatives to a Russian dominated gas supply market. Given the tensions that are being felt across Europe right now with the Russian annexation of Crimea, there could not be a better time for the EU to turn towards its allies and neighbors in hope of an increased energy security in the future.

The objective of this work is to not only create an account of the historical developments which led to the current situation, but also provide coherent analysis aimed at guiding future policy development. This is not a finished work and I intend to parallel my analysis with the development of EU energy policy in the future.

Geneva, Switzerland
May 6, 2014

GABRIEL ALFREDO URIBE

Acronyms

EU - European Union

EC - European Commission

UN - United Nations

GCC - Gulf Cooperation Council

IEA - International Energy Agency

USGS - United States Geological Survey

US EIA - United State Energy Information Administration

OME - Observatoire Méditerranéen de l'Energie (Think Tank)

US - United States of America

TRNC - Turkish Republic of Northern Cyprus

EEZ - Exclusive Economic Zone

TAP - Trans-Adriatic Pipeline

TANAP - Trans-Anatolian Pipeline

RES - Renewable Energy Sources

LNG - Liquefied Natural Gas

GDP - Gross Domestic Product

Bcf - Billion cubic feet (usually related to amount of gas)

Bcm - Billion cubic meters (usually related to amount of gas)

Tcf - Trillion cubic feet (usually related to amount of gas)

Tcm - Trillion cubic meters (usually related to amount of gas)

Abstract

This paper is divided into various sections in order to provide a comprehensive understanding of the current state as well as the future of the EU's energy policy. The main section is the analytical section, which is divided into four sub-sections. The first sub-section offers an understanding of the background to the EU energy policy, as well as the current context under which it is being analyzed. This sub-section is also accompanied by key definitions and figures in this topic. The following sub-section will look at the different relevant actors in the topic of EU energy security. Not only will it analyze the EU itself, but it will also analyze both geostrategic and geopolitical partners of the EU from various global regions. Sub-section 4.3 will focus entirely on the technical and political capabilities of future potential regional energy partners of the EU. It will offer an in-depth understanding of three regions with which the EU will most likely end up developing strong strategic energy partnerships. This sub-section will also identify why Turkey will end up playing a crucial part in the future of the EU's energy security policy to take on the role of a 'gatekeeper' to the EU's energy demand market.

The last sub-section, 4.4, lays out short, medium, and long-term plans that the EU's energy policy will most likely take on, based on the analysis contained in this paper. While it is a speculative section of the paper it uses reasonable deduction of the past EU energy policies and current geopolitical relationships that the EU has with various regions and allies to create likely scenarios. These scenarios will have been compiled from both the quantitative and qualitative primary and secondary research that was conducted in order to obtain a comprehensive multifaceted overview of the EU energy policy.

This paper's ultimate goal is to be able to provide an understanding of the future energy relationships that the EU will have as a result of the east-west energy corridor that is being built in order for the EU to have access to the Middle East, Persian Gulf, Levant Basin, and Caspian energy regions. The energy relationships that will be forged with these regions are going to be the driving force behind a reduction of the overwhelming current dependence on Russian gas.

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1. Introduction

It is often said that as long as the light stays on, the world keeps spinning; that the root of human development in the 20th and 21st Century has been the exploitation of available energy resources to us. Without it, we would not have been able to advance as a society. It is this often forgotten truth, the root of development, which has made us both stronger and weaker – as a result of our heavy reliance on it, and the countries which supply these natural energy sources. To be a country that is energy independent is a luxury that few have, and to be controlling energy flows is a privilege reserved for only a handful of those. Not only does the control of natural energy resources give a country an upper hand in international relations, but being able to control both one's enemies and friends' energy supply gives a government political power far beyond its borders. Few natural energy resources, with the exception of oil, have proven this to be true than natural gas. This reliance on other's natural resources to provide the required energy has left countries and their governments exposed to a lack of control over what could be argued is one of the most vital infrastructures for any modern state. This phenomenon in international relations has lead to energy security policies taking an increasingly important role in governments' both domestic and foreign policies. One can observe this trend in international relations occurring due to the topic of energy supply security having become more important for international system dynamics after economic factors became equally important to political and military factors in the 21st century security perceptions.[1]

Energy security, which can be defined as "the uninterrupted availability of energy sources at an affordable price"[2,3] is a phenomenon that began to appear much more predominantly as part of a country's security policy in the 1970s after the Middle East Oil Crisis, in which the world realized the heavy reliance that had been placed on natural energy resources for the development of world economies.[4] After this crisis, which also brought about it the creation of the International Energy Agency (IEA), it has

[1] Gokhan Ozkan, "The Nabucco Project Within the Context of Energy Supply Security and International Politics," *China-USA Business Review* 10, no. 8 (2011): 689.
[2] International Energy Agency, "Energy Security," accessed April 24, 2014, http://www.iea.org/topics/energysecurity/
[3] This is the definition of "energy security" that will be referred to in this paper when the topic is discussed.
[4] Escribano Frances Gonzalo, "Market Or Geopolitics? the Europeanization of EU's Energy Corridors," *International Journal of Energy Sector Management* 5, no. 1 (2011): 40, Accessed April 9, 2014, http://search.proquest.com/docview/864099162?accountid=11243 .

become common for nations to tie energy policy to security policy, as Dr. Furfari, an expert on energy geopolitics at the Free University of Brussels, put it.[5] With this also came about the concept of "energy diversification"[6], which became an important foreign policy strategy for nations to be able to avoid the trap of falling under the monopoly or oligopoly of a single or few foreign entities that had control over natural energy resources. By actively pursuing a policy of energy diversification, governments would be able to ensure stable economic and physical development of the country due to a constant flow of the needed energy resources. While energy security and energy diversification are two policies that are increasingly pursued in most countries they are not always successfully executed due to the geopolitics which have in turn caused tensions to arise in various global regions.

In few regions of the world is this as perfectly exemplified as in Europe. Europe, being a highly developed economic region, with the European Union (EU) economic zone having the second highest Gross Domestic Product (GDP) in the world after the US, is the second biggest natural gas[7] consuming region of the world. As a region, the EU currently consumes roughly 520 billion cubic meters (bcm) of gas per year.[8] The continent would essentially not be able to operate in an economic capacity if its gas supplies were to be cut off. As economic development is so closely tied to a nations political strength, an economic collapse could potentially also lead to national crises. When it comes to Europe's energy security, Europe continues to be in a very difficult situation, due to its declining native natural energy resource production. This has meant that it has had to rely heavily on its neighbors, especially Russia, for its supply of both oil and gas, creating a volatile energy security situation for Europe, and the EU in particular. Despite the diversity in the energy mix among its member states, the EU has a heavy reliance

[5] Dr. Samuele Furfari, Professor on Geopolitics of Energy, *Université Libre de Bruxelles*, Interview by Gabriel Uribe, 10 April 2014, European Commission, Department of Energy, Brussels, Belgium.
[6] While no single definition of "energy diversification" exists, for the purposes of this paper it shall be defined as "a nation using multiple sources of energy to run its economy and public services, eliminating dependence on any one source or type of energy. Such diversification can mean both renewable and non-renewable energy sources as well as multiple carriers, operators, suppliers, and sources of origin of the natural energy resource."
[7] Natural gas is to be referred to as "gas" from here on forth.
[8] See figure 4.1.2.1 (p.19).

on external supplies of energy – it has to import slightly more than 50% of its gas consumption[9] - requiring the EU to maintain strong diplomatic and political ties with its energy suppliers to ensure a continuous flow of gas. However, Europe's rocky relationship with Russia in the last few decades has led to several accounts of Russia temporarily cutting off its gas supply to certain European countries, most recently in 2009 to Ukraine[10]. This posed a threat to the EU's energy security, which led to the push for a diversification of energy suppliers to Europe in an effort to diminish the heavy reliance that the EU had on Russian gas. Recent events in Ukraine in early 2014 only served to remind the threat that Russia cold pose to Europe's economic stability, which has pushed EU policy makers to search for alternatives to Russian gas.

The purpose of this paper will therefore be to analyze the state of the EU's energy security and the options that it has in order to diversify its energy suppliers as well as the types of energies it consumes. This paper will analyze this topic from a geopolitical context in order to be able to evaluate the implications that the EU's decision to attain its gas from an additional source will have. It will therefore assess the suitability of various potential energy partners for the EU and will then consider likely future scenarios for the EU energy policy based on those findings. The geopolitical energy chessboard of Europe will thus be examined in order to find an advantageous solution to the long-existing dilemma of Russian gas dominance in the EU market, as well as the feasibility of reducing Russian influence on European energy needs in the long run.

2. Literature Review

[9] Jorg Doerler, Kurt Oswald, and Akshat Seth, "The Future of the European Gas Supply," A.T. Kearny, December, 2011, accessed April 9, 2014, http://www.atkearney.com/paper/-/asset_publisher/dVxv4Hz2h8bS/content/the-future-of-the-european-gas-supply/10192 .
[10] Koji Fujishima, "European Strategies on Gas Supply Security," *The Institute of Energy Economics, Japan*, (2009)

The issue of security policy in the EU is one that has its origins in the 1970s, and thus several relevant academic research papers exist in the topic, many of which analyze the issue from a theoretical perspective, although some also tackle the issue from the perspective of future potential solutions. Besides academic papers, many think tanks, such as A.T. Kearney, the Institut für Europäische Politik, and the Observatoire Méditerranéen de l'Energie, conduct reviews of the current quantitative state of energy supplies to the EU market. There is therefore a significant amount of quantitative and qualitative research in the topic of EU energy security. One of the most relevant ones that will be referred to in this paper is "Long-term natural gas supply to Europe: Import potential, infrastructure needs and investment promotion" by Manfred Hafner et al., as it gives a very thorough background of the current gas supply and demand situation in the EU, while also providing a breakdown of each future potential gas supplier to the EU. It thus helps to create a solid understanding of future geopolitical implications of potential EU energy partnerships with those suppliers. However, it does not thoroughly discuss the EU energy policy or EU energy security policy.

This is where the academic paper "The Nabucco Project Within the Context of Energy Supply Security and International Politics" by Gokhan Ozkan from the *China-USA Business Review* comes in, as it does address the issue of EU energy policy and the implications of future partnerships with different suppliers and regions. Furthermore, this paper discusses the importance that the east-west energy corridor will play in the future of EU gas supply.

To complement this paper from more of a quantitative perspective, "Europe's Energy Future: Natural Gas Supply between Geopolitics and the Markets" by Manuel Mohr was widely referred to due to its in depth analysis of not just natural gas supply, but also of its demand in the EU from a energy policy perspective. It therefore also helped to solidify the theory that while there is high demand for gas in the EU at the moment, in the long-run this demand will most likely drop due to the EU's energy policy of reducing dependence on fossil fuels in the future.

While none of the referred to academic papers compete in the different schools of thought applied, they all see the issue of EU energy security as a vital one that is primarily a security policy issue and then an economic issue. Where this paper aims to fill the gap in academic research is by tying the issue of EU energy security to the contemporary issue of the 2014 Ukraine Crisis and the subsequent annexation of Crimea by Russia. It therefore aims to analyze the problem from the perspective of EU energy security in the 21st century being rooted in a desire to diminish dependence on Russian gas while creating an outlook on future energy partnerships between the EU and its neighbors.

3. Research Methodology

As this paper aims to address a policy question and the geopolitical strategies and implications that lie behind it, the analysis will rely on both qualitative and quantitative data. The qualitative data will be used in order to assess the current gas supply and demand market in the EU as well as to be able to project where demand and supply will lie in the future. This type of data will be attained from secondary sources and will aid in creating an assessment of the energy supply at the moment, and to be able to determine the impact that this will have on energy security.

In order to have an understanding of the policies in place by the EU with regard to energy security, qualitative data will be used. This will be attained from the EU itself, as well as from the energy department of the European Commission (EC). In addition, various academic papers from foreign policy and security policy journals will be used to have a comprehensive overview of these policies. By combining the qualitative and quantitative data with the geopolitical implications that the various actors in this topic have, confident predictions can be made about the future of the EU gas supply vis-à-vis to energy security.

Lastly, a further crucial component of this research paper is the interviews that were conducted in order to also understand the perspective of policy experts and academics in this topic. 6 experts were interviewed with each interview lasting roughly one hour. Interviews were conducted in both Geneva,

Switzerland, as well as in Brussels, Belgium. Interviewees worked for academic think tanks, universities, as well as for international organizations. This meant that a wide variety of sources, perspectives, and opinions were consulted in order to make this research paper possible.

4. Analysis

4.1 Background and current gas demand/supply figures, as well as future projections

4.1.1 Background

On March 21st 2014, Russian president Vladimir Putin signed a law that formalized Russia's annexation of Crimea from Ukraine. This will have been one of the most significant moments of the Ukrainian Crisis of 2014, yet behind this crisis loomed a much bigger and problematic one for Europe and the EU – a crisis which the EU has been facing for years. Through the annexation of Crimea, Russia once again flexed its muscles and demonstrated the threat that it could become to Europe. Since the start of the Russian-European energy partnership, Ukraine had always been an important pawn in the European energy chess game due to its geographical location separating Russia from the EU, meaning that a lot of the Russian gas supply pipelines to the EU markets had to pass through Ukraine. An unstable Ukraine would therefore be a serious threat to Europe's security policy as it could imply disruptions in Russian gas deliveries to Europe. While Russia is not the sole gas supplier to the EU, it is the most significant, as 33% of the gas that the EU imports, comes from Russia.[11] This has made many EU policy makers uneasy due to the strong influence that Russia has had, and continues to have, on EU economic development. In her article, German makes this clear by making the connection that energy security affects state security so that cuts of energy supply can impact economic dynamics quite seriously.[12]

[11] see figure 4.1.2.2
[12] Tracey German, "Pipeline Politics: Georgia and Energy Security." *Small Wars & Insurgencies* 20, no. 2 (2009).

This is an issue which the European Commission (EC) – the executive body of the EU – has been aware of for several years now, and it has led them to create the "Energy Security and Solidarity Action Plan", which was reviewed for the second time in 2008.[13] It states, "Europe can and must diminish its vulnerability to energy supply shocks, first and foremost by developing its own strengths, internally and externally."[14] As can be expected from the EU this means a deeper emphasis on European energy interdependence by introducing several mechanism which allow the members to be able to support themselves in the case of supply shocks, as well as calling for a much more responsible use of the EU's native natural resource supplies in order to be able to prolong their lifespan. The strategy is five-pronged, however it has three main parts to it, which are i) diversification of energy supplies, ii) external energy relations, and iii) oil and gas stocks and crisis response mechanisms.[15] This increasingly present policy of the EU, which is being pursued on a supra-national level, will see the emergence of new players in the great European energy game, for many of which this will alter their status on the global stage. The US, being a key ally of the EU, also has an interest in the development of the EU energy policy as it is imperative to the US's status of being a global superpower to also have an influence in the future direction of EU energy policy.[16] However, as Dr. Furfari put it, immediate change in the EU's energy policy will not come easily or quickly as "space, time, and capital are needed to develop the energy policy."[17]

The energy crisis that Ukraine faced in 2009, when Russia cut off its gas supply for two weeks, only served to remind the EU of the potential threat that Russia poses. This is why the EU, in order to have a more stable energy security, must diversify its portfolio not only to different sources of energy, but also to different types of energy. Crucially, it must also reduce the percentage of total energy that it attains from one region in order to prevent an oligopoly from forming around the EU energy supply market. New

[13] European Commission, "EU Energy Security and Solidarity Action Plan: 2nd Strategic Energy Review," EU Press Release Database, November 13, 2008. Accessed April 25, 2014, http://europa.eu/rapid/press-release_MEMO-08-703_en.htm?locale=en .
[14] ibid.
[15] ibid.
[16] Ozkan, *Nabucco Project Within the Context of Energy Supply Security,* 693.
[17] Op. cit., Dr. Samuele Furfari

discoveries of hydrocarbon reserves in the Levant Basin, as well as the development of several new gas pipeline routes through Europe from Central Asia, the Balkans, and the Caucasus have presented plenty of new options for the EU to be able to diversify its energy supply portfolio. However, where the EU will turn to for its energy needs will have a deep impact on those regions, and thus the geopolitical implications need to be understood in order to realize where the EU will be heading in the future with its energy policy.

4.1.2 Current gas demand/supply figures for Europe, as well as future projections

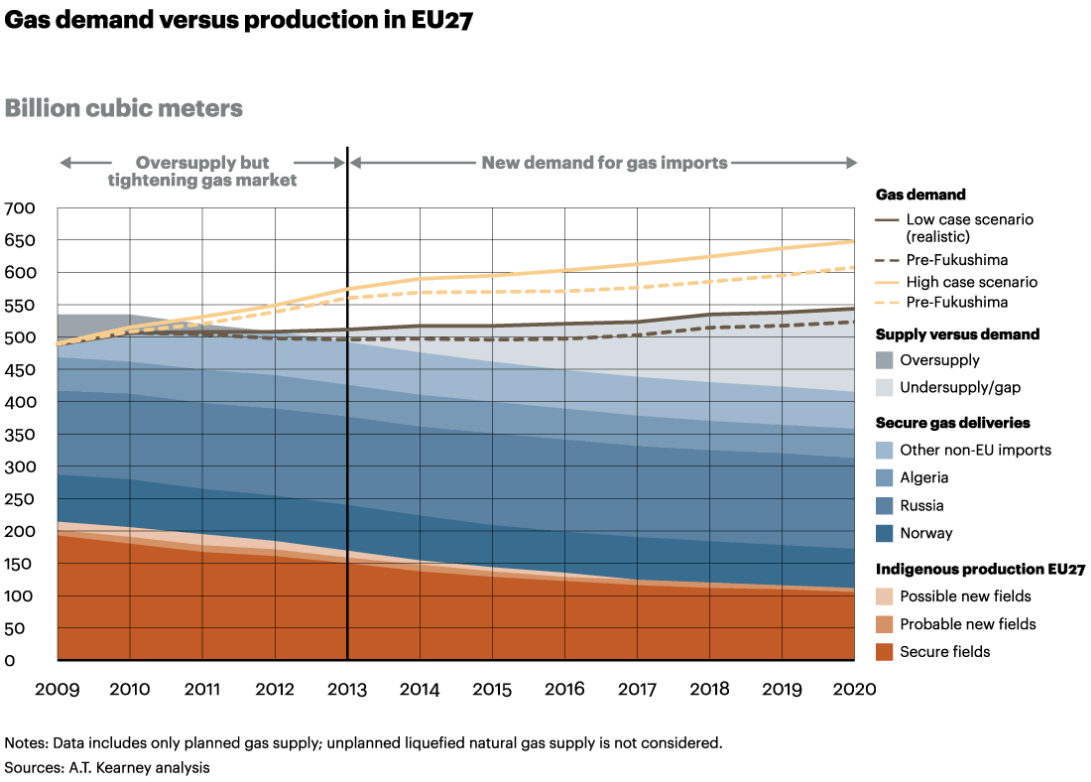


Figure 4.1.2.1 – Current and future gas production and supply for EU. (© A.T. Kearney, 2011)

In order to be able to understand why the EU needs to diversify its energy supply portfolio, one has to look at the current state of the European energy supply market. While indigenous production of energy in the EU roughly accounts for 45% of energy that is consumed,[18] this number is projected to keep declining

[18] Op. cit., European Commission, 2008.

in the future. A.T. Kearney, in their report on the future of the European gas supply, indicate that this number could potential drop down to anywhere between 15%-20% given the rise in gas demand that can be expected in the EU.[19,20] This would mean that the EU would have to further rely on its imports from Russia, Norway, and Algeria, who combined provide roughly 75% of all of the EU's natural gas imports.[21,22]

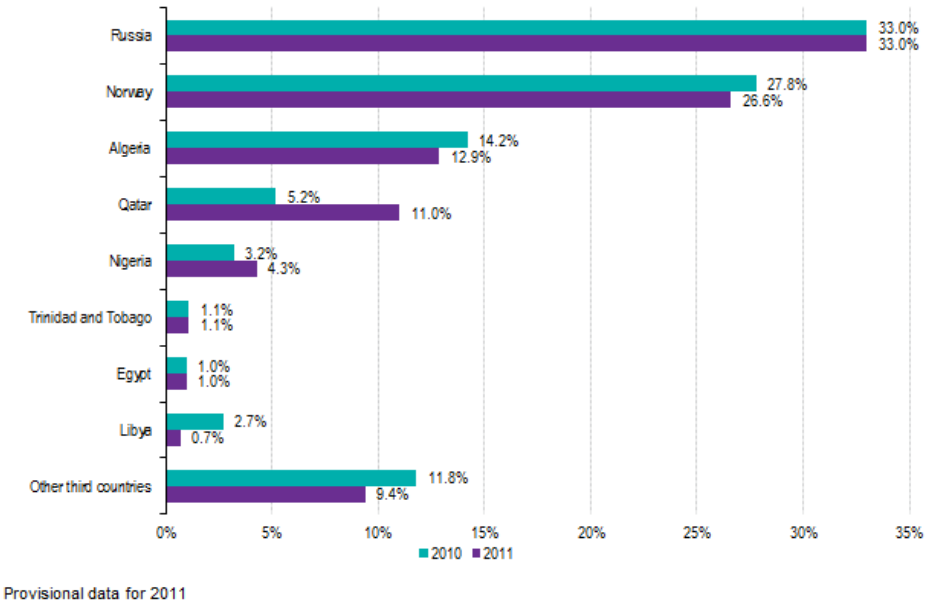


Figure 4.1.2.2 – EU natural gas imports by country of origin. (© Eurostat, 2012)

In the EU, natural gas accounts for 24% of gross inland consumption, making it the second most used source of energy after oil (which accounts for 34% of gross inland consumption).[23,24] Although it only accounts for 25% of gross inland consumption, about a third of the gas that is consumed is used for power generation, making it a vital part of the electricity infrastructure of the EU.[25]

[19] Op. cit., Doerler et al., A.T. Kearney, 2011.
[20] See figure 4.1.2.1
[21] European Commission. "EU-27 Imports of Natural Gas – Percentage of Extra-EU Imports by country of origin, 2011." Eurostat. June 4, 2012. Accessed April 29, 2014. http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:EU-27_imports_of_natural_gas_-_percentage_of_extra-EU_imports_by_country_of_origin,_2011.png&filetimestamp=20120604085013 .
[22] See figure 4.1.2.2
[23] European Commission. "EU Energy in Figures: Statistical Pocketbook 2013." 2013. Accessed April 29, 2014. http://ec.europa.eu/energy/publications/doc/2013_pocketbook.pdf .
[24] See figure 4.1.2.3
[25] Op. cit., European Commission, 2013.

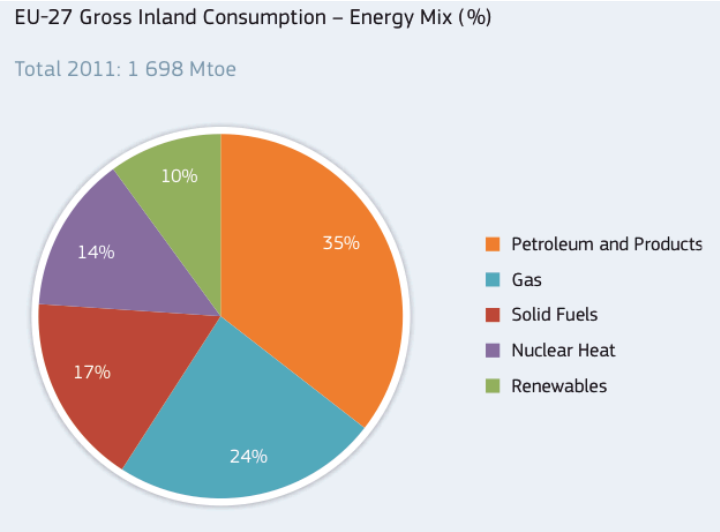
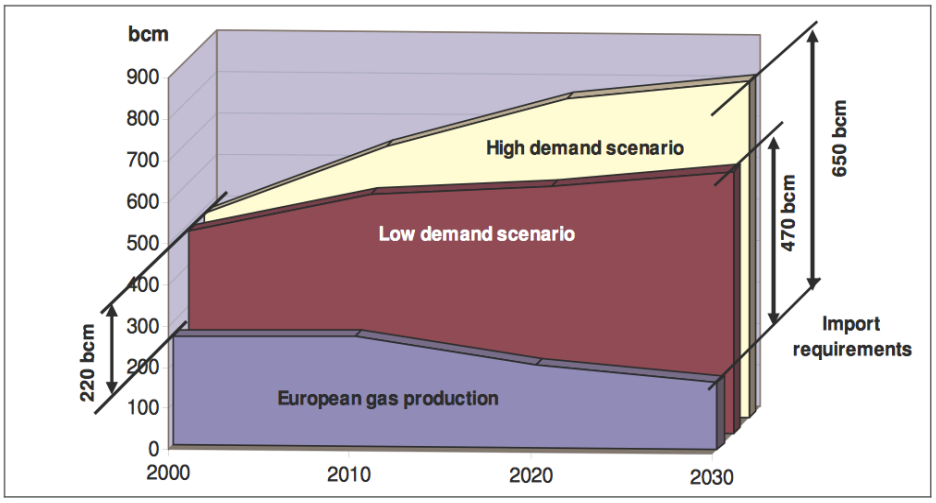


Figure 4.1.2.3 – EU energy mix, 2011. (©European Commission, 2013)

In order to be able to put the challenge that the EU is facing in the future into perspective, one can look at the projections that the Mediterranean Energy Observatory (OME) has made for EU gas demand up to 2030, which indicates import requirements of between 470 and 650 bcm of gas within 20 years.[26,27]



Europe-34 corresponds to EU-27 plus Switzerland and all the Balkan countries
Source: DG-TREN and OME

Figure 4.1.2.4 – Future gas import requirements for EU. (© OME, 2008)

Although Russia would theoretically be able to keep up with Europe's demand, according to the Institut für Europäische Politik's forecasts, it would seem unlikely that Russia would keep up its share of the

[26] Manfred Hafner et al., "Long-Term Natural Gas Supply to Europe: Import Potential, Infrastructure Needs and Investment Promotion," *Energy and Environment* 19, no. 8 (2008): 1131-1153, accessed April 12, 2014, DOI:10.1260/095830508786939839.
[27] See figure 4.1.2.4

European natural gas supply market in the future due to the massive demands in natural gas that are forecast for the Asian market, creating competition to the European demand market for the destination of that Russian gas.[28,29]

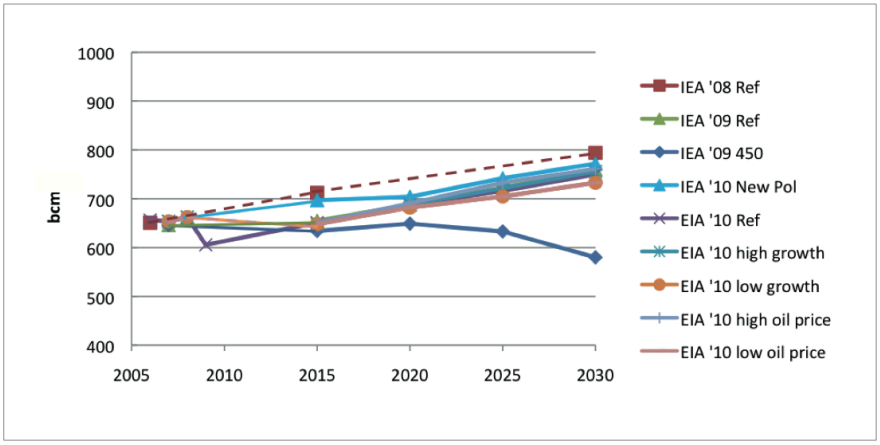


Figure 4.1.2.5 – Projections of future Russian natural gas production. (©OME, 2008)

This therefore leads to the conclusion that if the EU is to wean itself off of a mostly Russian dominated European gas supply market, in which some countries rely up to 100% on Russian gas, it must diversify its portfolio to regions that have either already made large hydrocarbon reserve discoveries, or to those that have the infrastructure in place for the extraction of gas.

4.2 Relevant actors and their interests

The following section will analyze the main actors concerned with the future of the EU's energy policy, either because they will influence, or because they will contribute to the gas supply market. It will look at each actor on a case-by-case basis in order to determine the motivations of that actor as well as what role it will play in the future of the EU's energy policy, in addition to how vital the actor will be in the grand scheme of it.

[28] Op. cit., Mohr, 2009.
[29] See figure 4.1.2.5

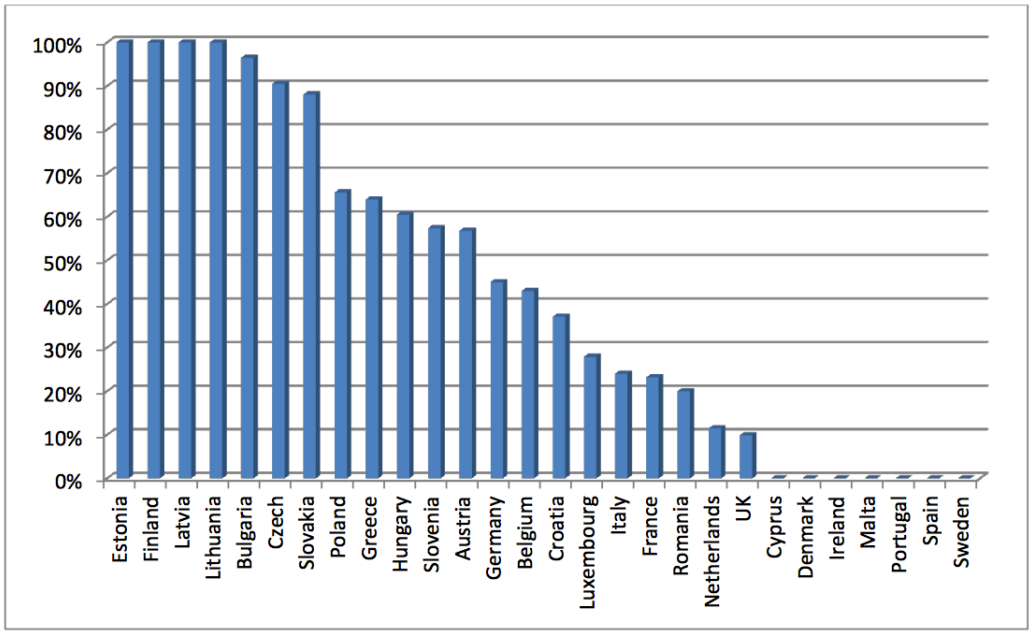
4.2.1 – The European Union

The European Commission, which is the executive arm of the EU, is the body that proposed and created mechanisms for the implementation of the multi-lateral energy policy, which is nowadays very focused on energy security. However, the EU cannot unilaterally implement or define it without any external influence from some key actors. Two key actors in the future of the EU's energy policy will remain to be both the US and Russia, due to the influence in the policy that they already portray nowadays. Although one of the main reasons for the revised energy policy is to reduce Russian influence on EU energy security, the EU will most likely never be able to completely rid itself of this influence which Russia exercises due to the existence of the gas pipeline infrastructure creating massive lost economic opportunities for both the EU and Russia if they were to abandon this mutually vital partnership. For the US it is important to maintain an influence in global energy markets, as a result of the influence which they have on global markets and thus also the global balance of power.[30] It therefore follows that the US would also have high interest in the development of the second biggest energy market of the world, which is also the one of one of its closest allies.

If the EU is to expand its gas supplier portfolio through a diversification process, it must look for regions where it can avoid some of the issues it has had with the Russian supply of gas. Since three Eastern European EU member states are ex-Soviet states, Estonia, Latvia, and Lithuania, Russia still has influence over them, which makes it unsurprising that all three rely 100% on Russian gas, as can be seen in figure 4.2.1.[31] This has created a relationship in which the supplier has a control over the consuming countries' energy which indirectly gives the supplier control over the others' economy. This is a very dangerous relationship for the EU and thus part of its energy security policy is to diversify to other energy partners in the future that would not have this ability. Furthermore the level of instability of the countries

[30] Op. cit., Ozkan, 2011, 696.
[31] Clingendael International Energy Programme. "Russian Gas Imports to Europe and Security of Supply – Factsheet." 2013. Accessed April 29, 2014. http://www.clingendaelenergy.com/files.cfm?event=files.download&ui=9C1DEEC1-5254-00CF-FD03186604989704 .

through which gas pipelines pass through to connect the source of the gas to its destination must be minimized as much as possible to ensure that there are no interruptions in the supply of gas. This is something which the EU has had to learn due to the sometimes politically volatile nature of some of the countries through which pipelines carrying Russian gas have to cross. A perfect example would be the Ukrainian Crisis of 2014 posing a constant threat to European gas deliveries due to the high number of pipelines connecting Russian gas to EU countries, which pass through Ukraine. There are therefore several geopolitical factors which the EU has to consider in order to be able to determine that an additional gas supplier is not only economically and structurally viable, but that it also contributes to EU energy security efforts. Essentially, the EU does not act alone when it comes to its energy policy and ultimately for it to be an effective and comprehensive one, that also emphasizes energy security and energy diversification, it must act on a multi-lateral level with both the East and the West.



Graph 1: Share of Russian gas in consumption, EU-28 (%), 2012 data (Gazprom and BP Statistical Review 2013)

Figure 4.2.1 – Russian gas imports in EU member states by country. (©CIEP, 2013)

4.2.2 – Russia

Not only has Russia gained massive economic benefits by being Europe's biggest gas supplier, but it has also gained vast amounts of foreign influence too. Therefore, it would not be in Russia's interests to lose this influence, meaning that it would have to find alternative ways to continue to indirectly maintain it

over the EU's gas supply. However, while it may seem like Russia has the upper hand when it comes to the Russian-EU energy partnership, several key experts on EU security policy point out that it is actually the other way around. Dr. Biscop, a leading EU security policy expert from the Egmont Institute in Brussels, argues, "without Europe as a customer, the Russian economy would collapse"[32] while also noting that both parties would lose if there were any lengthy gas interruptions. However, they would lose to different extents. Since Europe is Russia's most important customer, a large portion of its economy relies on this relationship, which is also complemented by heavy Foreign Direct Investment (FDI) from the EU in its infrastructure, meaning that any interruption into this economic flow for even a month would cause a significant crisis for Russia.[33] Meanwhile, due to the EU Energy Security and Solidarity Action Plan, the EU is establishing enough gas stocks to be able to serve Europe for 2 months without gas imports in the case of a supply crisis.[34] This has therefore established an unspoken relationship of "Russia needs Europe more than Europe needs Russia."[35] In order for Russia to therefore continue its influence it must go beyond its geopolitical implications with regard to EU gas supply and use the state-owned gas giant Gazprom to influence this market. It has been able to successfully do so when one looks at alternative gas supply regions for Europe. While Russia's geostrategic proximity helped it secure a close relationship to the EU's energy market, this has not been an advantage to it in the last few years. What can be observed therefore is the combination of its geostrategic location and the might of Gazprom to influence the energy rich neighbors it has to its south and to its east, mainly the Balkans, Caucuses and the Caspian region, which are three regions where there is EU interest in the potential for them to become suppliers to the EU gas market.[36] By becoming involved in several gas pipeline projects as well as establishing long-term partnership deals with these regions' hydrocarbon reserves, Russia is ensuring

[32] Dr. Sven Biscop, Director of "Europe in the World" department, *Egmont Institute – Royal Institute for International Relations,* Interview by Gabriel Uribe. April 11, 2014, Egmont Institute Offices. Brussels, Belgium.

[33] Dr. Philippe Copinschi, Professor and expert on EU energy security, *Sciences Po Université, Paris,* Interview by Gabriel Uribe, April 11, 2014, Café in Brussels, Brussels, Belgium.
[34] Op. cit., European Commission, 2008.
[35] Op. cit., Copinschi, 2014.
[36] Op. cit., European Commission, 2008.

continued indirect as well as direct influence on the EU gas market to prolong its status as an energy superpower.[37]

4.2.3 – Cyprus

Cyprus is a very interesting case and considered by some a blessing to the EU energy situation due to the recent hydrocarbon reserves that have been discovered in its Exclusive Economic Zone (EEZ). The massive *Aphrodite* field that was discovered in 2011 contains an estimated 7 tcf of gas in an EU-member country, making it the second largest discovered gas field in the EU.[38] This discovery, which is one of the many discoveries found in the Levant Basin in the last 15 years,[39] (see table 4.2.3.1) will help to contribute towards the EU's efforts of energy interdependence. Cyprus sees the gas as elevating it financially, especially after the euro crisis, as well as making it a key player on both the international stage and the energy supply market. This discovery will therefore also most likely elevate Cyprus's status within the EU. However, historical tensions between Cyprus, Greece, and Turkey stand in the way of the development of the gas fields due to the division of the Island between Cyprus and the self-declared Turkish Republic of Northern Cyprus (which is only recognized by Turkey), this has meant that they have had to navigate a very delicate diplomatic path in recent months when addressing the development of gas fields. This is because of claims made by Turkey that the discoveries found by Cyprus also belong to its northern counterpart, which can unfortunately not be verified as no Exclusive Economic Zone (EEZ) boundaries exist between the Turkish Republic of Northern Cyprus and Cyprus due to lack of international recognition for the northern part of Cyprus. What would have to follow in the next few years for this region to become an addition to the EU gas supplier portfolio would be a rapid development of the field as well as a strategy for a method of extraction and transportation of the gas. However, there are

[37] Op. cit., Ozkan, 2011, 692-693
[38] US Energy Information Administration (US EIA), "Overview of oil and natural gas in the Eastern Mediterranean region," August 2013, Retrieved on Feb. 19, 2014 from http://www.eia.gov/countries/analysisbriefs/Eastern_Mediterranean/eastern-mediterranean.pdf
[39] Ibid.

disputes over whether pipelines through Turkey or Liquefied Natural Gas (LNG) are better methods of extraction, in addition to diplomatic tensions playing part in this decision.[40]

4.2.4 – Israel

Israel, like Cyprus, has been blessed with massive hydrocarbon reserves that have been discovered in the last 15 years.[41,42] In Israel there have so far been a confirmed 33 tcf of gas discovered, which at Israel's current consumption levels[43] is enough to last them more than 200 years.

Recent natural gas discoveries in the eastern Mediterranean region

Country	Discovery date	Field name	Estimated reserves (Tcf)	First volumes
Cyprus	2011	Aphrodite	7	2017
Israel	1999	Noa	0.04	2012
	2000	Mari-B	1.5	2004
	2009	Dalit	0.5	2013
	2009	Tamar	10	2013
	2010	Leviathan	18	2016
	2011	Dolphin	0.08	unknown
	2012	Shimshon	0.3	unknown
	2012	Tanin	1.2	unknown
	2013	Karish	1.8	unknown
Palestinian Territories	2000	Gaza Marine	1	unknown

Source: EIA estimates, IHS, Oxford Institute for Energy Studies, Oil & Gas Journal, company reports, trade press

Figure 4.2.4.1 – Recent gas field discoveries in the Levant Basin. (© US EIA, 2013)

For Israel, the discoveries can be see as a segue to (i) energy independence, (ii) national economic prosperity, and (iii) to further establish national security.[44] Israel, who will be ready to export gas in 2017, therefore has the very viable potential of becoming an additional gas supplier to the EU. It has the benefit of its proximity to the EU as a direct neighbor as well as the potential partnership of Israel and Cyprus in

[40] Natural Gas Europe, April 22, 2014.
[41] See figure 4.2.4.1
[42] Op. cit., US EIA, 2013.
[43] Roughly 350 million cubic feet (Mcf) per day (Energy Tribune, 2011)
[44] Nikolas Panayiotides, "The new geopolitics of the natural gas in the Levant." *Palestine - Israel Journal of Politics, Economics, and Culture* 19, no. 1 (2013), retrieved on Feb. 20, 2014 from http://search.proquest.com.proxygw.wrlc.org/docview/1445258879 .

cooperating to export their gas to the EU market. Geopolitically, Israel would be a wise choice due to an existing fruitful relationship between Israel and the EU, as well as Israel not posing the threat of monopolizing certain European countries' gas markets, as is the case with Russia. However, the EU would also have to consider the existing relationship that Israel has with Russia, which can be considered very amicable. Gazprom, in its efforts to be involved in other regional gas markets, secured the exclusive rights to export and develop all LNG discovered in Israel's Tamar field.[45] Therefore an EU energy diversification strategy including Israel, while having potential, would not be free from Russian influence.

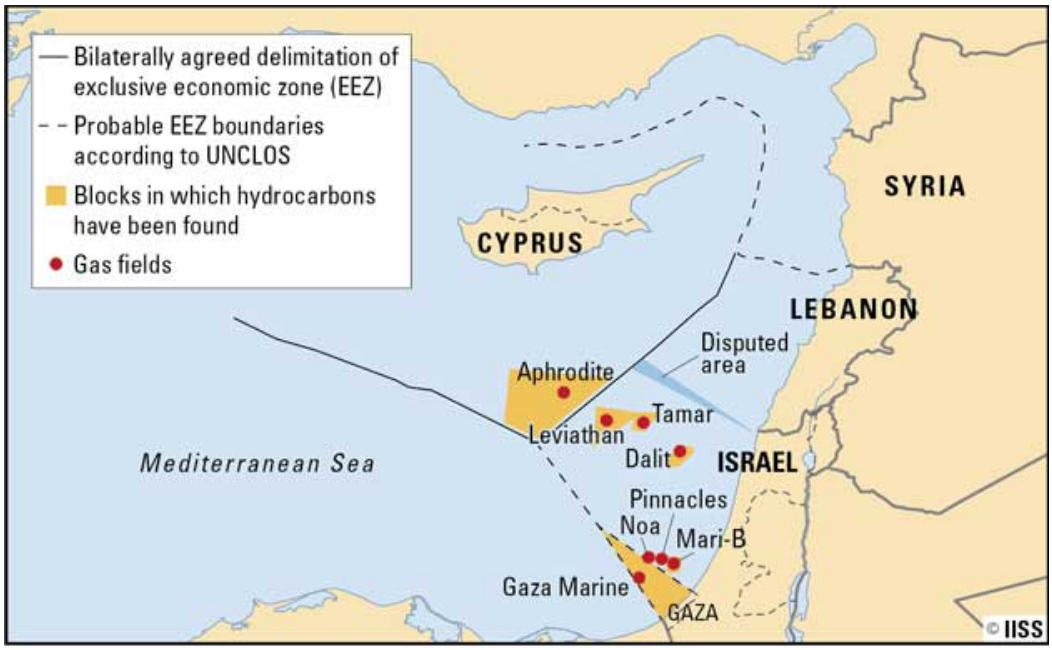


Figure 4.2.4.2 – Map of discovered hydrocarbon reserves in the Eastern Mediterranean (© IISS, 2013)

4.2.5 – United States

The US has an interesting role in the EU energy policy as it plays a role from the perspective of a global superpower instead of that from a current or future potential energy supplier. It has an interest in diminishing Russia's dominance over the European energy supply market as it sees Russia as being a

[45] Keith Johnson, "Putin's Mediterranean Move" *Foreign Policy Magazine*, 27 December 2013, retrieved on February. 28, 2014 from http://www.foreignpolicy.com/articles/2013/12/27/putin_s_mediterranean_move

rival global power, even in the post-Cold War era.[46] Due to the US's close economic relationship with the EU, it must also ensure that the EU has a strong energy security due to the links between its energy security and its economic prosperity. The support that the US has offered to the EU in the past can be seen in that the EU's regional energy policies depend on constituting an energy export infrastructure that bypasses Russia with the support of the US.[47] However, the US is also eager to get involved in the EU energy supply market due to the boom it has seen in domestic shale gas production. By getting involved in the EU energy supply market through gas exports, the US would extend the already existing energy partnership that exists nowadays due to US exports of coal to the EU. The extensions of this relationship was a point that US Secretary of State John Kerry was eager to make amid fears of a Russian gas cut-off to Europe, when he stated that the US would supply the EU with all the gas it needed in order to move away from an over-reliance on Russian gas.[48] Although this is not theoretically possible for another 20 years, the statements that he made reaffirmed the strong relationship between the two allies and the US commitment to "help Europe find alternative sources of energy beyond Moscow's control."[49] It can therefore be expected that the US will have a continued influence in EU energy policy agenda setting in the future.

4.2.6 – Turkey

Turkey has an interesting role in the future of the EU's energy policy, as it will not be so much of an energy supplier, as being a vital part of the future of EU energy security. This is due to its geostrategic location, as most future new gas suppliers to the EU will have their gas pass through Turkey to reach the EU demand market. As indicated in the EU Energy Security and Solidarity Action Plan there is an interest in the development of the Southern Gas Corridor in order to create access to gas supplies from the Middle

[46] Op. cit., Ozkan, 2011, 694.
[47] Op. cit., German, 2009, 344.
[48] Keith Johnson, "Energizing Europe." *Foreign Policy Magazine*, 2 April, 2014, Accessed on April 22, 2014, http://www.foreignpolicy.com/articles/2014/04/02/energizing_europe .
[49] Ibid.

East, the Caspian region, the Caucasus, and the Balkans.[50] This has led to a plethora of pipelines to be planned, including the South Stream pipeline, Nabucco and Nabucco-West, the Trans-Adriatic Pipeline (TAP), and the Trans-Anatolian Pipeline (TANAP), which all pass through Turkey (with the exception off the South Stream pipeline). The geopolitical implications of Turkey as a key part of the future EU energy security strategy can therefore not be overstated, as it will hold in its safeguard a large portion of the continents energy supply routes. In addition, Turkey is also being considered as a transit country for a potential Israeli-Cypriot joint gas pipeline to Europe. Therefore no matter in which direction the EU chooses to expand its energy supply portfolio, Turkey is sure to gain from it, as the role it will have to play will elevate its status both at the EU level and at the global level. However, this also creates a situation in which once again the EU is entrusting a single actor with a large portion of the EU energy security responsibility, as it has done with Russia, which could become a dangerous proposition for the EU. Ozkan highlights the importance that Turkey could play in his analysis of the future potential of the Nabucco pipeline, while also stating that "if the project is realized, Turkey will be one of the key countries of the east-west corridor" in addition to playing a role in the development of a southern gas corridor.[51]

4.2.7 – Qatar

Qatar has established itself as a global LNG giant, by having become the world's largest producer of LNG, which it sources from the North Field, one of the largest gas fields in the world.[52] Qatar accounts for 11% of the EU's gas supply[53] due to its main form of gas export being LNG, for which there is not as big of an infrastructure present in Europe, as there is with conventional gas through pipelines. However, Qatar's new export strategy is to increase LNG exports to Europe to account for a third of its LNG trade

[50] Op. cit., European Comission, 2008.
[51] Op. cit., Ozkan, 2011, 692.
[52] Op. cit., Hafner et al., 2008, 13.
[53] See figure 4.1.2.2

to create a potential of exporting 80 bcm/year of gas to Europe by 2030.[54] Europe is also looking to develop its LNG import infrastructure in the future to create an alternative to conventional gas.[55] While the development towards a much more significant energy partnership between Qatar and the EU will most likely not be seen this decade, the potential of Qatar as being a significant additional source to EU gas supply cannot be underestimated, especially with France, Italy, and the UK looking to develop new LNG re-gasification import terminals.[56]

4.2.8 – Iran

Iran has seen a positive development of its relations with the US and the EU as a result of the election of the new president, President Rouhani, as well as the fruitful discussions it had with regards to its nuclear energy program in November of 2013, which has led to the possible gradual lifting of sanctions. This has re-introduced Iran on the global diplomatic stage as being a state that is starting to cooperate again with the West. Consequently, the EU is therefore starting to consider it as a potential future gas supplier, as it has massive amounts of gas reserves in its South Pars gas field. While it is not expected for this gas relationship to still develop this decade, it has the potential to contribute to gas exports from the Middle East, which are at very minimal levels at the moment. What is interesting is the Memorandum of Understanding that Iran has signed to contribute gas to flow through TANAP in the future, indicating that while no definitive plans have been made between the EU and Iran, a structure for a future relationship between the two regions is being developed.[57]

4.3 Possible strategies and regions of interest, and geopolitical implications of EU energy partnerships

[54] Op. cit., Hafner et al., 2008, 13.
[55] Op. cit., European Commission, 2008.
[56] Gonzalo Escribano Frances, "Market Or Geopolitics? the Europeanization of EU's Energy Corridors," *International Journal of Energy Sector Management* 5, no. 1 (2011).
[57] Op. cit., Ozkan, 2011, 694.

4.3.1 Regions

4.3.1.1 – Levant Basin

The Levant Basin[58] is a region that has seen significant hydrocarbon reserve discoveries in the last decade, and it has thus become a region of interest to the EU as a potential addition to the EU gas supply portfolio. Looking at table 4.2.3.1 (p. 27), one can see the large number of fields that have been discovered in the region, particularly in Israel, and the pace at which they are being developed to be operational. Between Cyprus and Israel there are more than 40 tcf of gas that have been discovered at this point[59], with the United States Geological Survey (USGS) estimating a total of 122 tcf of gas still being undiscovered in the Levant Basin.[60] To put this into context, Russia, which holds the world's largest natural gas reserves, has an estimated 250 tcm of gas reserves, which is roughly six times more than the potential of the Levant Basin, an area several times smaller than Russia.[61] Given that EU gas consumption is at roughly 520 bcm[62] at the moment, the Levant Basin has sufficient gas reserves to become a major gas supplier to the EU in the medium to long term[63]. The development of these fields, as well as the time it will take to do so, will determine the appropriateness of this region as a future gas supplier to the EU. However, this is a region with various disputes between neighbors that are rooted in the past, and these will need to be overcome in order to create partnerships and cooperation required to be able to exploit the newly found riches.

In early 2014, the Israeli High Court approved for up to 40% of its natural gas to be exported[64], which opened up discussions for how to export these vast amounts of gas. Israel has a geostrategic problem of being a Jewish state in a predominantly Arabic-Islamic region, meaning that there are security

[58] Levant Basin is the waters between Egypt, Israel, Lebanon, Syria, and Cyprus. See figure 4.2.4.1 for a map of the region.
[59] US Energy Information Administration (US EIA), "Overview of oil and natural gas in the Eastern Mediterranean region," August 2013, Retrieved on Feb. 19, 2014 from http://www.eia.gov/countries/analysisbriefs/Eastern_Mediterranean/eastern-mediterranean.pdf .
[60] Ibid.
[61] Op. Cit., Hafner et al., 2008, 8.
[62] Op. Cit., Jorg Doerler, A.T. Kearney, 2011.
[63] Medium term referring to within 10-20 years; Long term referring to within 20-35 years.
[64] Reuters, "Update 3 – Israel takes steps towards becoming a gas exporter" Reuters.com, February 7, 2014, accessed on Feb. 18, 2014 from http://www.reuters.com/article/2014/02/07/woodside-leviathan-idUSL3N0LB5KU20140207 .

concerns in place over on-shore transportation of the gas through one of its neighbors due to past historic tensions.[65] Thus a partnership with Cyprus has become an increasingly popular alternative to onshore transportation through pipelines, due to both states finding themselves in the similar positions of newly found hydrocarbon wealth. Various export routes have been explored, and at the moment there are two possibilities to get the gas to the EU market: one being through a pipeline that runs through Turkey, and the other option being a joint LNG terminal in Cyprus. Both options would see a cooperation of Cyprus and Israel, yet both also have significant issues to overcome before being realized.

A pipeline from Israel and Cyprus through Turkey would be the cheapest option, as it would cost roughly $2.5 billion versus the LNG terminal would could cost up to three times more,[66] however there are geopolitical implications which would have to be considered first. The pipeline would originate from the Israeli Leviathan field, and from there it would pass through Cyprus' EEZ to reach the Turkish port of Ceyhan (see figure 4.3.1.1). This route would allow the pipeline to avoid both Lebanon's and Syria's EEZ, where it is suggested that there would be frequent disruptions if the pipeline were to pass through them due to the political tensions between those two countries and Israel. However, the problem of building a pipeline through the middle of the Mediterranean without any close proximity to land is that the pipeline would have to be set relatively deep (about 2000 meters),[67] meaning that there would be a considerably higher cost of construction than if it were to be built along a coastline, such as Cyprus's. Therefore if both Turkey and Israel want to find a both realistic and economically viable route for the pipeline, it would have to both traverse Cyprus' EEZ as well as probably be built near its coastline, if not have parts of it built onshore Cyprus. However, there is a diplomatic minefield that would have to be cleared before this is possible due to the historical tensions between Turkey and Cyprus.

[65] Michael J. Economides, "Eastern Mediterranean Energy: The Next Game." Energy Tribune, June 5, 2012. Accessed on Feb. 21, 2014 from http://www.energytribune.com/11093/eastern-mediterranean-energy-the-next-game#sthash.Q4aJrKhQ.dpbs
[66] Natural Gas Europe, "Turkey and Israel May Reconcile After Years of Tension" April 4, 2014, Accessed April 12, 2014, http://www.naturalgaseurope.com/turkey-israel-may-reconcile-after-years-of-tension .
[67] Ibid.

As Turkey does not recognize the Republic of Cyprus, due to tensions arising out of the legitimacy of the government of the Turkish Republic of Northern Cyprus (TRNC), which no government in the

Figure 4.3.1.1 – Proposed path of Israeli-Turkish pipeline (© Stratfor, 2014)

world except for the Turkish government recognizes, it makes it difficult to establish amicable relations between the two states. This hostile diplomatic relation arose out of the division of the island in 1974 when Turkish Cypriots claimed the north of the island and have since established a government there. This has created the geopolitical tension between the Turkey, the TRNC, and Cyprus which has created a stagnation in the development and exploration of the potential gas fields in Cyprus' EEZ. Cyprus has said that it would not permit the construction of the pipeline through its EEZ until Turkey recognizes the existence of the Republic of Cyprus and makes an effort to resolve the conflict that has divided the island for the past 40 years.[68] This creates the problem that there must be a resolution to the long running territorial dispute before a pipeline could even be built, which is creating a delay in the construction of it,

[68] Op. cit., Natural Gas Europe, April 4 2014.

and thus also a delay in getting the gas to both the Turkish and the EU markets. However, it would also be in Cyprus's interest to resolve this issue as its economic situation after the euro crisis has left it desperate for an economic jump-start, which this gas opportunity could provide, given the interest the EU has already expressed[69] in having an partner in the Mediterranean region. While these tensions might exist, from a geopolitical perspective, the benefits of reconciliation between Cyprus and Turkey significantly outweigh the drawbacks primarily as it would help to advance the harmony in the region while erecting a strong multilateral energy partnership between Cyprus, Israel, and Turkey.

Reconciliation would not only permit the construction of the pipeline, and would thus give Israeli gas access to the EU market, but it would do the same for Cypriot gas. This is because a pipeline which runs near Cyprus's coastline would make it easy for Cyprus to also feed it with gas from their 7 tcf *Aphrodite* field. Therefore Cyprus could also participate in the EU gas market without major investments of its own. Furthermore, although Cyprus has been considering the alternative of building a LNG terminal in its Vassilikos port, it has been having issues with both the financing of it as well as the justification for it in their current state. While the construction of it would free Cyprus from having to use Turkey as a route for its gas, it would not be able to justify the construction of it without the participation of Israel due to Cyprus not having sufficient recoverable gas reserves at the moment to rationalize the construction of a multibillion-dollar LNG terminal.[70] The former Executive President of the Cyprus National Hydrocarbons Company, Mr. Charles Ellinas, commented that in order for the LNG terminal to be viable, Israel would have to participate with the gas from its *Leviathan* field, or otherwise Cyprus would have to wait to discover more hydrocarbon reserves in its EEZ to justify the construction of the terminal, a process which could delay the export of Cypriot gas to an EU market by several years.[71] Therefore while the LNG terminal option might still be possible, it would not help Cyprus to export its gas within the next 5 years.

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[69] Op. cit., European Commission, 2008.
[70] Karen Ayat, "Vassilikos LNG Terminal Construction Negotiations Reach Final Stages" August 12, 2013, accessed April 24, 2014, http://www.naturalgaseurope.com/cyprus-vassilikos-lng-terminal .
[71] Natural Gas Europe, "Cyprus' Role in East Med: Plan A and Plan B" February 20, 2014, Accessed April 9, 2014. http://www.naturalgaseurope.com/cyprus-east-med-european-gas-conference .

Lastly, through reconciliation of relationships between Cyprus and Turkey, Cyprus would potentially benefit from a Turkish project that is providing the TRNC what can be considered the most important resource in the world: water. In an effort to help the water-sparse Turkish side of Cyprus, Turkey is building an unprecedented 60-mile underwater water pipeline to meet the high demand of water in an area where there are constant shortages.[72] A reunification of the two sides of Cyprus would therefore mean that there could be an exchange of resource, water for gas, which are two resources that both sides desperately need. This would therefore not be the first time that energy has encouraged reconciliation, as Dr. Furfari himself says "In Europe there is a record of peace and reconciliation through energy".[73]

Turkey would also benefit from a normalization of relationships, as it suffers from the same plight as the EU of having a heavy dependence on Russia for its gas supplies.[74] Turkey is tackling this through the construction of TANAP, and while the main suppliers of gas for this pipeline would be countries in the Caspian region, additional gas supplies from the Levant Basin would only help to reinforce the importance of this pipeline. Cypriot and Israeli gas, though a joint pipeline to Turkey, would therefore be able to reduce Turkish dependence on Russian gas while also further legitimizing a project that would establish an east-west corridor to give the EU access to gas from central Asia through Turkey.

Cyprus can therefore take a page from Israel's diplomatic strategic efforts to reestablish foreign relations with Turkey, after a three-year hiatus which was the result of the 2010 Israeli raid on a flotilla bound for the Gaza strip that left 7 Turkish people dead.[75] However, this reopening of diplomatic relations was brokered by the US, which does indicate the interest of the US to see an Israeli-Turkish pipeline being constructed.[76] Perhaps this is due to US interests in diminishing Russian gas influence on this region while also empowering the efforts of EU gas diversification. What it does show is that the US is

[72] Associated Press, "Cyprus Water Project a Peace Pipeline to Some, a Turkish Trojan Horse to Others" February 28, 2014, Accessed on March 1, 2014, http://www.foxnews.com/world/2014/02/28/cyprus-water-project-peace-pipeline-to-some-turkish-trojan-horse-to-others/ .
[73] Op. cit., Dr. Samuele Furfari, April 10, 2014.
[74] Op. cit., Natural Gas Europe, April 4, 2014.
[75] Ibid.
[76] Karen Ayat, "The Likelihood of a Leviathan-Turkey Pipeline" Natural Gas Europe, February 27, 2014, accessed April 9, 2014, http://www.naturalgaseurope.com/natural-gas-pipeline-turkey-israel .

invested in having an impact in the direction that energy policy goes in the region. Even though this is the case, neither the US nor the EU can prevent Russian influence in this region, seeing how Russia has close diplomatic relations with both Cyprus and Israel. As a result of this, Russian energy giant Gazprom was able to secure the exclusive rights to export and develop LNG from Israel's Tamar field.[77] This therefore means that Russia would still indirectly be influencing EU energy policy, even amid efforts to diversify their portfolio of gas suppliers. The fact that Gazprom became involved in this region, as well as in various other regions around the world validates Dr. Copinschi's theory that Gazprom is trying to become a global player in order to defend their economic interests instead of just Russia's political endeavors.[78] However, since Gazprom will only be involved with Leviathan he believes that "their involvement in Israel would not be a major focus for them".[79] While this might be true it does validate the fact that the EU will not be able to completely rid itself of Russian influence on its energy supply or its energy policy.

Just as important is also the realization that the Levant Basin, although still a few years before it will be involved in the EU gas market, is a region which has drawn wide international interest to become a zone where multilateral agreements are needed in order to take advantage of the potential geopolitics of the region for the sake of future EU energy security. Furthermore, an EU energy partnership with this region would have various implications, as it would encourage the peace reconciliation process between Cyprus and Turkey, while also forging a multilateral partnership between Cyprus, Israel, and Turkey. In addition, the demand for gas which the EU market presents in the future, and the supply which this region could provide, would mean that the creation of TANAP would be even more essential in order to help diversify the EU gas supply portfolio.

[77] Op. cit., Keith Johnson, December 27, 2013.
[78] Op. cit., Dr. Philippe Copinshi, April 11, 2014.
[79] Ibid.

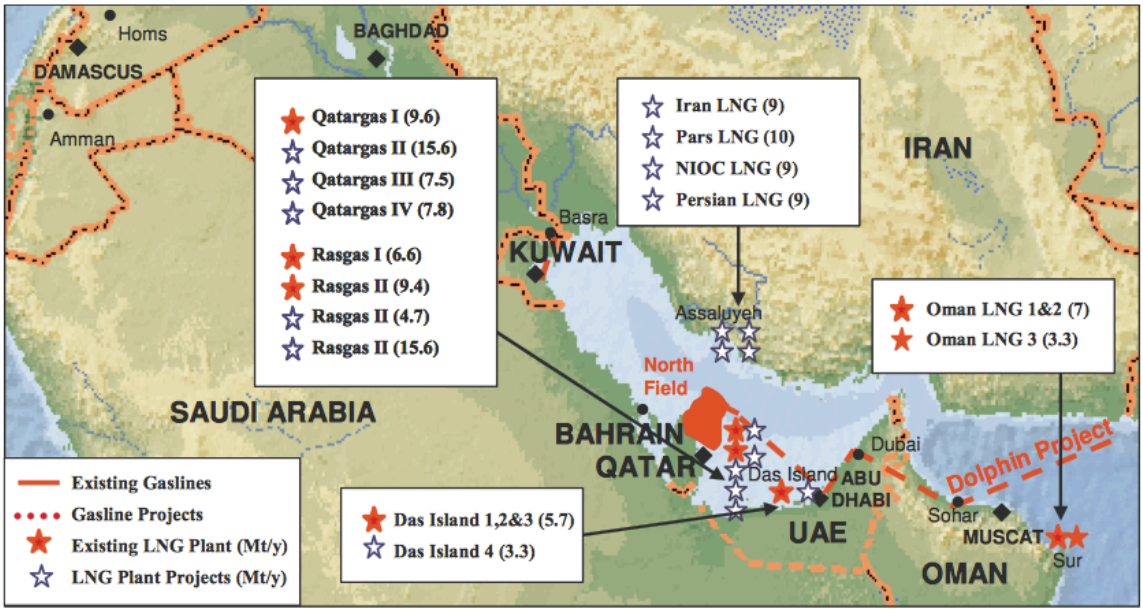
4.3.1.2 – Persian Gulf

The EU has had a tumultuous relationship with the Persian Gulf[80] and the Middle East in terms of being a supplier of energy, as it was the Middle East Crisis of the 1970s that initiated energy security concerns in the EU.[81] Therefore turning back to this area as a supplier of both oil and gas is something that does not come without reservations as Dr. Furfari explains.[82] Dr. Copinschi adds to this by saying that the EU energy policy "for the last 30 years has been mainly anything but the Persian Gulf".[83] This can be seen in that the largest contributor to the EU gas market from the Persian Gulf is Qatar, which currently contributes roughly 10% to the total EU gas imports, while African nations contribute a total of upwards of 20%.[84] However, given the current state of EU energy security, this relationship could see a potential to return to its previous state, since the EU Energy Security and Solidarity Action Plan outlines efforts to be made for the "Development of a Southern Gas Corridor for supply from Caspian and Middle Eastern sources and possibly other countries in the longer term, improving security of supply".[85] As Qatar is considered to be a world leader in terms of LNG production, an EU move towards the Persian Gulf would fulfill what Dr. Furfari considers to be two vital components for a general strategy of the EU energy policy, which are i) a diversification of energy sources, and ii) a diversification of origins of energy.[86]

The Persian Gulf collectively accounts for about 40% of global proved natural gas reserves, which includes the world's largest non-associated gas field, the Qatari North Field.[87] This makes it a key region in energy geopolitics and a very serious contender for the EU's future gas supplier portfolio. What is interesting about this region is that it focuses primarily on LNG as a form of gas export instead of on pipelines. An energy partnership between the EU and the Persian Gulf would therefore help to accelerate the EU's ambitions to increase its use of LNG as alternative gas form. Looking at figure 4.3.1.2.1, one

[80] The Persian Gulf consists of Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, and Yemen.
[81] Mr. Marc Finaud, Senior Program Advisor, Emerging Security Challenges Program. *Geneva Center for Security Policy (GCSP),* Interview by Gabriel Uribe, 14 April 2014, United Nations Offices in Geneva, Geneva, Switzerland.
[82] Op. cit., Dr. Samuele Furfari, April 10, 2014.
[83] Op. cit., Dr. Philippe Copinschi, April 11, 2014.
[84] See figure 4.1.2.2 (p. 20).
[85] Op. cit., European Comission, 2008.
[86] Op. cit., Dr. Samuele Furfari, April 10, 2014.
[87] Op. cit., Hafner et al., 2008.

can see the projects planned for the expansion of LNG terminals in various countries, indicating an expected increase in production. This can be related to both the increase in gas demand that can be seen in the future for both the EU and the Asian gas market.



Source: OME

Figure 4.3.1.2.1 – LNG plants and projects in Persian Gulf countries (© OME, 2011)

The EU demand for gas has led two countries to take leadership in gas productions and exports in the Persian Gulf: Iran and Qatar. This potential in LNG exports from both countries to the EU has led to a potential in the broadening of energy infrastructure in the EU to be able to cope with a future increase in demand of LNG.[88] From a security policy perspective, Dr. Biscop, who specializes in the area of EU foreign policy and EU security policy, believes that the "GCC (Gulf Cooperation Council)-EU relation is handicapped"[89,90], and therefore an energy partnership could help to strengthen this relationship. Current LNG imports to the EU are at around 80 bcm of gas, and this number is expected to double by 2020, meaning that there needs to be a push for LNG infrastructure construction in the EU as current

[88] Dr. Christian Koch, Director, *Gulf Research Center Foundation (GRCF),* Interview by Gabriel Uribe, 9 April, 2014, Gulf Research Center Foundation Offices, Geneva, Switzerland.
[89] Op. cit., Dr. Sven Biscop, April 11, 2014.
[90] The Gulf Cooperation Council (GCC) consists of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

infrastructure would not be able to support it.[91] However, as could be seen with the case of Cyprus, LNG infrastructure is significantly more expensive than a gas-pipeline infrastructure. The benefit of LNG is that it is far more flexible than gas pipelines in terms of where the gas is sourced from, which would give the EU flexibility in terms of energy diversification without having to commit to any source in the long-term.

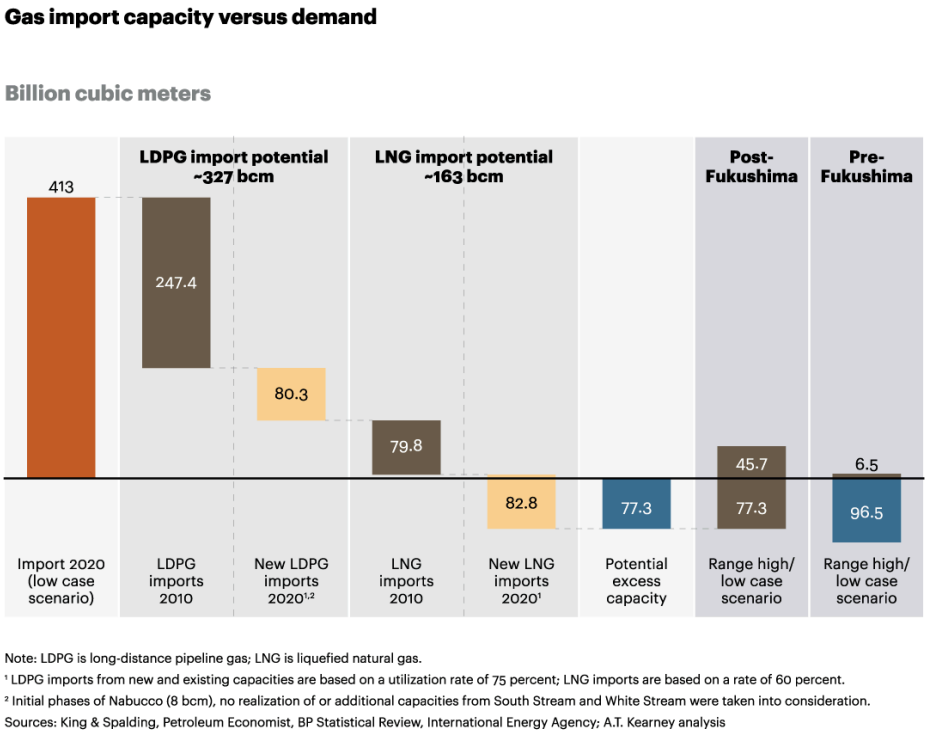


Figure 4.3.1.2.2 – EU current and future gas import capacity versus demand (© A.T. Kearney, 2011)

To be able to cope with this increased supply, several LNG gasification terminals are being planned in the EU: two in Italy, two in Spain, one in France, one in Brussels, and two more in the UK.[92] While the development of this entire infrastructure will take time to build, making LNG more of a medium to long-term plan in the EU's energy development, it will bring flexibility to the EU gas supply portfolio beyond just the Persian Gulf.

[91] Op. cit., Jorg Doerler et al., A.T. Kearney, 2011.
[92] Op. cit., Hafner et al., 2008, 17.

A further crucial geopolitical implication of an EU energy partnership with the Persian Gulf is that Iran would start to again play an important role in EU energy policy. Due to the impetus in Iranian foreign relations with both the US and the EU in the past year, the EU can start looking at Iran as a future energy partner. However, the problem with Iran as an energy partner is that "Iranian competition will not happen in short term, but rather in long-term, due to a requirement of progress and sanction reliefs before Iran would export significant amounts of gas to EU market"[93], meaning that Iran would not be a solution to the issue of EU over-dependence on Russian gas. Rather, it could be seen as a significant gas supplier to the EU market within 10 to 15 years.

Lastly, a major potential development of an energy partnership between the EU and the Persian Gulf would be an exchange of technological resources for the development of Renewable Energy Sources (RES). RES account for about 10% of the EU energy mix[94], with the EU energy policy aiming to increase this share to 20% by 2020.[95] Dr. Koch, who is the Director of the Gulf Research Center Foundation in Geneva, theorizes that with the Persian Gulf's desire to be less dependent on its own supplies of natural energy resources comes the aspiration for an increase in RES development as an alternative to fossil fuels.[96] This is a field in which the EU has made major advances, yet it is not as significant as fossil fuels in the total energy mix. An energy partnership that develops out of oil and gas imports to the EU from the Persian Gulf could therefore develop into one of an exchange of technological know-how of RES. While this would be much more of a long-term relationship, it does encourage an energy relationship to be developed in the short to medium-term to be able to segue into this long-term relationship between the EU and the Persian Gulf.

The geopolitical implications of a relationship between these two regions are therefore multifaceted. It would push for an adoption of LNG in the EU market, which would lead to an increased

[93] Op. cit., Dr. Christian Koch, April 9, 2014.
[94] See figure 4.1.2.3 (p. 21).
[95] Op. cit., European Commission, 2008
[96] Op. cit., Dr. Christian Koch, April 9, 2014.

flexibility in terms of energy sources due to LNG not being bound to the same source of origin restrictions as pipelines. Furthermore, in the medium to long-term, the EU would have a strong energy partner with significant quantities of gas, which would help to diminish reliance on Russian gas. Likewise there would be an improvement in relations with Iran, which has the added benefit of brining harmony to the region due to economic ties trumping political or ideological disputes, as has been suggested through the theory of economic interdependence leading to peace – the perfect example of which would be the EU itself. Consequently, the EU would also create a more stable neighborly region for Europe. Lastly, such a relationship would have the benefit of being one that goes beyond just natural energy resources, but also has the potential of being one which includes the exchange of RES technology, a further economic benefit.

4.3.1.3 – The Pipelines: The Balkan and Caspian regions

While both the Levant Basin and the Persian Gulf fulfill the requisites to be potential additions to the EU gas supply portfolio, the earliest time significant quantities of gas from these regions would reach the EU market, or in the case of Qatar an increase in supply of LNG, would be at the end this decade due to the requirement for both the planning of infrastructure in some cases, or the construction of it in others.[97] However, a third potential region for the EU to explore as an addition to its gas supplier portfolio would be central Asia, specifically the Caspian region. There, in Azerbaijan, Kazakhstan, and Turkmenistan, largely untapped gas fields have the potential of creating an east-west gas corridor between them and Europe. In order for the EU to be able to gain access to this region without Russian influence, a system of pipelines must be in place. This is because existing pipelines from the to the EU pass through Russia, which would defeat the purpose of an emphasis on a reduction of Russian influence on EU gas supply. Four pipelines, which are either in the process of being constructed, or have been approved for

[97] Mert Bilgin, "Geo-Economics of European Gas Security: Trade, Geography and International Politics" *Insight Turkey* 12, no. 4 (2010), accessed April 16, 2014, http://search.proquest.com/docview/763263520?accountid=11243 .

construction, will help to create the east-west corridor: TAP, TANAP, and Nabucco, as well as the South Stream pipeline which is considered the Russian competition to the EU-backed Nabucco.

The size of gas reserves in the Caspian region are quite vast, however due to their geographical situation, their gas system, which was designed in the Soviet era, had been designed to supply Russia.[98] Consequently the countries in this region had been depending on Russia for gas exports to Europe.[99] The purpose of these pipelines is therefore for the EU to have a direct access to these vast gas reserves without having Russia as a middleman. Azerbaijan is forecast to annually produce between 30 and 70 bcm of gas by 2020, with this number expected to stabilize by 2030.[100] In Turkmenistan there is a high chance of additional gas fields being found, which means that the current annual production figure of around 50 bcm of gas is expected to increase to 120 bcm of gas.[101] Similarly to Turkmenistan, there are also expectations of further gas discoveries in Kazakhstan, with estimates of gas production increasing three fold from its current levels of around 30 bcm to more than 90 bcm by 2030.[102] The Caspian region therefore shows promise in being a region with sufficient quantities of gas for the amount of capital that is being invested in its infrastructure, as each pipeline costs upwards of $4 billion USD.[103]

The various pipelines that have been proposed and are being constructed to connect the Caspian region as well as the Middle East with Europe overlap each other and therefore some projects are redundant. However, these pipelines not only represent a competition of trying to reach the EU gas market first, but also a struggle for the EU to be able to further distance itself from Russian influence over EU gas supply.[104] Figure 4.3.1.3.1[105] shows the routes that TANAP, TAP, and Nabucco (Nabucco West) will

[98] Op. cit., Hafner et al., 2008, 10.
[99] Ibid, 10.
[100] Ibid, 10.
[101] Ibid, 11.
[102] Ibid, 11.
[103] Dominique Finon, "The EU Foreign Gas Policy of Transit Corridors: Autopsy of the Stillborn Nabucco Project" *OPEC Energy Review* 35, no. 1 (March, 2011), Accessed April 12, 2014, DOI:10.1111/j.1753-0237.2010.00185.x .
[104] Ibid.
[105] Caitlin Del Sole, "Azerbaijan choses TAP over Nabucco to provide gas pipeline to Europe" The European Institute, August, 2013, accessed April 26, 2014. http://www.europeaninstitute.org/August-2013/azerbaijan-chooses-tap-over-nabucco-to-provide-gas-pipeline-to-europe-88.html .

take. This network of pipelines will not only help to establish the east-west corridor, but it also has the advantage of having two separate entries to Europe, ensuring a constant supply if the other path experiences temporary disruptions.

Figure 4.3.1.3.1 – Southern Corridor gas network, excluding the South Stream pipeline. (© The European Institute, 2013)

Nabucco was originally planned to be the combination of TANAP and Nabucco West, however due to both the competition of the South Stream pipeline, and the expansion of the South Caucasus Pipeline, the decision was made to shorten Nabucco to Nabucco West to make it more economically attractive, while also ensuring the construction of a pipeline through Turkey.[106] Russia knows of the EU's efforts to reduce dependence on Russian gas, and thus to ensure that it would not lose its footing in the EU market, it proposed the construction of the South Stream pipeline. This pipeline, which can be seen in figure 4.3.1.3.2[107], would also provide gas to southern Europe, and like the original Nabucco pipeline, it would also feed Europe through two different routes. However, there are two key difference between the two competing projects: South Stream would provide the EU with Russian gas, instead of Caspian gas, and would thus increase EU dependence on Russian gas, and secondly it would not pass through Turkey.

[106] Op. cit., Finon, 2011.
[107] Eke, Steven. "Russia signs gas pipeline deals." BBC. May 15, 2009. Accessed April 29, 2014. http://news.bbc.co.uk/2/hi/8051921.stm .

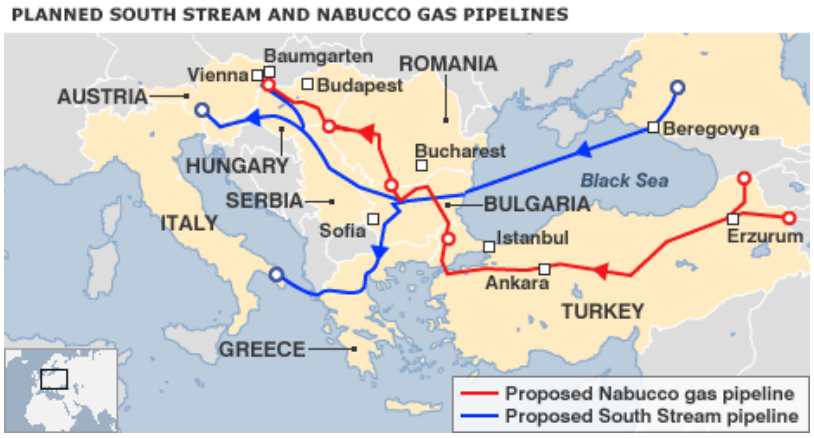


Figure 4.3.1.3.2 – Competing South Stream and Nabucco pipelines (©BBC, 2009).

The survival of Nabucco-West depended on Azerbaijani supplies of gas from the Shah Deniz gas field, and when in July 2013, the Shah Deniz Consortium made the decision to export its gas through TAP instead of through Nabucco-West, any reason for its existence disappeared, as there would not be sufficient gas supplies to feed Nabucco-West.[108] Therefore construction on Nabucco-West is still on hold, while the construction of the South Stream pipeline will go ahead as planned. While this represents a significant defeat in efforts for the EU to increase its energy security, it only delays EU efforts at increasing its energy security, instead of defeating them. This is because TANAP and TAP are still going to be constructed, meaning that avenues for the EU to have access to Caspian gas will exist in the future. This will therefore bridge these two regions by using Turkey as a middleman instead of Russia. Therefore even though Nabucco failed, Turkey still ends up becoming a key geostrategic partner of the EU, which Ozkan argues will help elevate Turkey's status in the eyes of the EU.[109] TANAP will therefore most likely not only become an access point to the EU gas market for Caspian gas, but also for the Middle East, and the Levant Basin. Since Israel and Cyprus might be exporting their gas to the EU market through Turkey, their gas would most likely pass through TANAP and then through TAP before reaching Europe. This will most likely also become the case for Middle Eastern countries exporting gas to the EU market. Iran also presents an interesting case, as although there are currently no firm plans for Iran to supply

[108] Chazan, Guy and Shotter, James, "TAP clinches Azeri gas pipeline deal" The Financial Times, June 26, 2013, accessed April 26, 2014, http://www.ft.com/intl/cms/s/0/41a3c048-de4f-11e2-b990-00144feab7de.html#axzz30lwjsDOo .
[109] Op. cit., Ozkan, 2011, 697.

significant amounts of gas to the EU market, Iran signed a Memorandum of Understanding with Turkey in 2008 in which it was agreed that Iran would supply Turkey with gas through a 2,000 km pipeline from Iran to Turkey's border.[110] This would therefore make it easy for Iran to supply gas to the EU, using Turkey as a segue, if an agreement is reached in which Iran would become an EU gas supplier.

Furthermore, another country that emerges victorious out of these pipeline wars is Greece. The EU-member country, which was severely affected by the euro crisis, will most likely see economic benefits as a result of being a transit country for TAP. This pipeline will also help to increase regional energy security, as it will become a major inter-European gas route. The geopolitical implications of the gas pipeline wars cannot be overstated. While Russia secured a victory with the South Stream pipeline, the combination of TAP and TANAP will encourage the development of a permanent multifaceted gas network that circumvents Russia, and will thus help to reduce EU dependence on Russian gas. It will become a crucial pillar for the EU's future energy security while supporting a vast energy diversification effort of the current EU gas supplier portfolio that extends into the Caspian, the Middle East, and the Levant Basin. What can therefore ultimately be observed in the future is Turkey potentially rivaling Russia as a major energy gateway to Europe.

4.4 Potential future scenarios

4.4.1 Short-term (2014-2020)

In the short-term, the EU has no choice but to continue its energy relationship with Russia as none of the alternatives discussed in this paper would be ready for at least another three years. When it comes to energy supply security, Fujishima theorizes that in the short-term, strategies focus on economic efficiency rather than on ensuring energy security, as there is a priority on being able to satisfy the demand for

[110] Ibid, 694.

gas.[111] It can be seen that the EU is following this theory due to the vital role that gas plays in the EU energy mix. A sudden drop in EU imports of Russian gas should therefore not be expected in the short-term due to the existing EU economic dependence on it.

What can however be expected is a rapid development in alternatives to Russian gas. Therefore the EU will most likely put pressure on the construction and development of TAP and TANAP, while also improving its relations with Turkey. The geopolitical importance of Turkey for the EU's energy security policy cannot be emphasized enough, and therefore with regard to the EU's behavior towards Turkey it would not be surprising if both the EU and the US would start to support Turkish foreign ambitions in the near future. The US would also have an interest in supporting the construction of these pipelines, as it would give them influence over a key energy market.

It should therefore also be expected that both the EU and the US would support and also aid efforts to reunite Cyprus in order for the EU to gain access to the Cypriot and Israeli gas fields through a pipeline to Turkey. While significant amounts of gas from either of these two countries will most likely only start flowing to the EU in the medium-term, serious efforts at reconciliation between Turkey and Cyprus should be expected in the short term. US involvement in this conflict would only serve to increase their influence in the regions' energy development, and therefore the US is playing a purely geopolitical game, while the EU is playing it with the intended purpose of securing its energy needs in the future.

While it may not occur until 2017, the US could also very likely start supplying the EU gas market with shale oil, as was stated by US Secretary of State John Kerry as an assurance against Russian gas supplies.[112] While this can be interpreted as being more than anything a friendly diplomatic gesture, almost suggesting a resurgence of the cold-war era relationship between the EU and the US, these supplies of shale oil would most likely be insignificant in the short-run.

[111] Op. cit., Fujishima, 2009.
[112] Op. cit., Johnson, April 2, 2014.

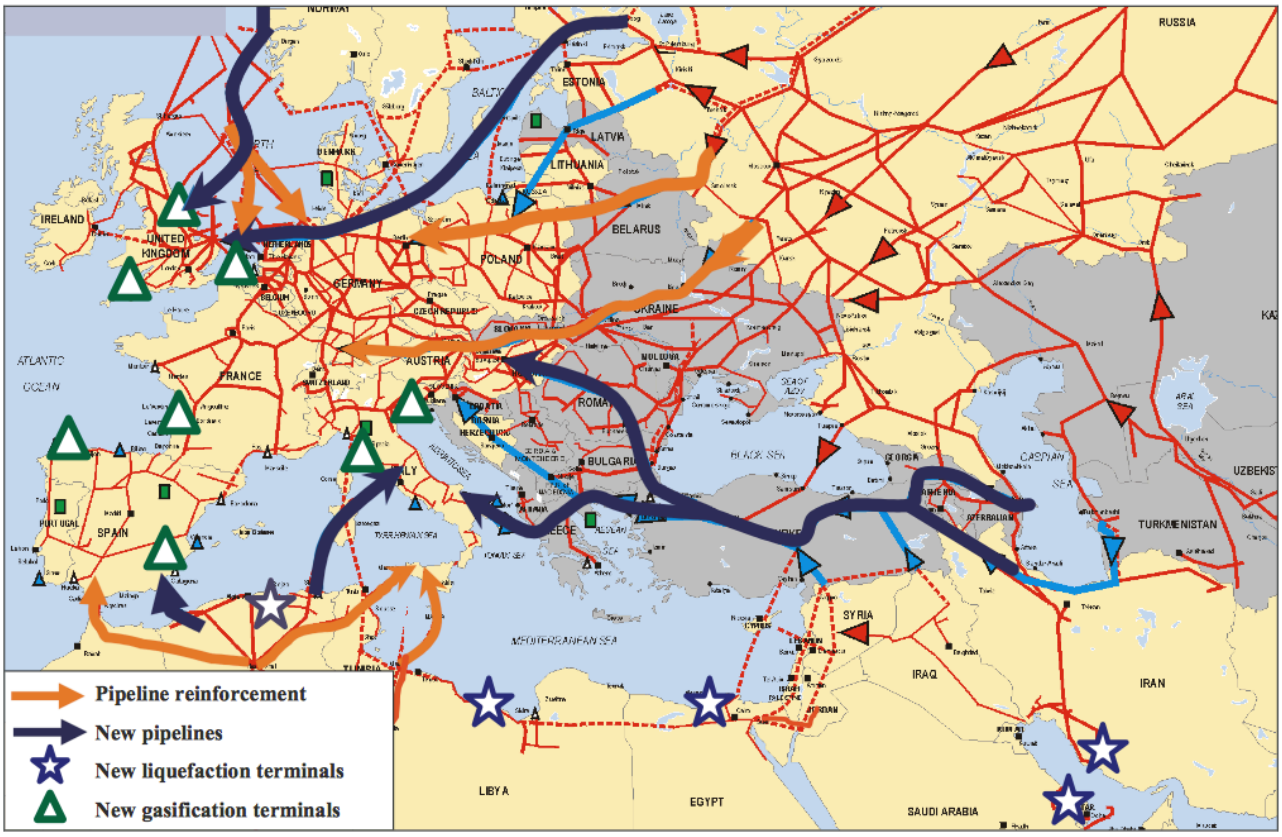
4.4.2 Medium-term (2020-2030)

In the medium-term the EU energy security policy that has been set in motion in the last couple of years can be seen materializing into a functioning system of gas pipelines, LNG terminals and numerous additions to the EU gas supplier portfolio. To start off, it would not be unreasonable to assume that given EU and US support for a Cypriot reunification, that Cyprus will reunify in this decade. If that were the case, then it would also be reasonable to assume that the Cypriot-Israeli-Turkish pipeline would have been built, thus creating a strategic energy partnership between the EU and the Levant Basin. In addition, given the likelihood of further gas discoveries in the Levant Basin, in both Israel's and Cyprus's EEZ, the LNG port that Cyprus is planning to build will most likely have also been built to give this region a flexibility in the export options of its gas. However, even though the Levant Basin would contribute to the EU gas supply, Dr. Copinschi believes that this region, as well as a future US supply of gas, would only be a "brick in the wall", meaning that they would not represent an overwhelming part of the total of EU gas imports.[113]

However, this could be considered progress as the EU is not over-relying on a single gas supplier, which would lead it to the political tensions that it is experiencing with Russia at the moment. Rather it would be both diversifying its suppliers and its forms of gas, as both A.T. Kearney, and the report by the OME predict that LNG will play a much more significant role in the EU energy mix in the next decade. Figure 4.4.2[114] is a map that depicts ongoing as well as future gas corridor developments in and to Europe, and it can be observed that there are expected to be several new LNG gasification terminals in the EU, as well as several new gas pipelines creating an east-west corridor between the EU and the Middle East, Levant Basin, and Caspian region. With these new LNG terminals, Qatar will most likely have started to significantly increase their export of LNG to the EU, which would help to forge a stronger energy relationship between the EU and the Persian Gulf. As the rekindling of relations between Iran and the EU

[113] Op. cit., Dr. Philippe Copinschi, April 11, 2014.
[114] Op. Cit., Hafner et al.,2008, 17.

has only been a development of foreign relations over the past few months, it would be too early to be able to firmly determine at what point the EU can expect to see significant imports of Iranian gas. Regardless of the expected time period for this energy relationship development, according to Dr. Koch it is expected to happen, especially since Germany already has relatively close ties to Iran.[115]



Source: EC DG TREN and OME

Figure 4.4.2 – Ongoing and future gas corridor developments to Europe. (©OME, 2008)

Yet perhaps the most prominent development in European geopolitical energy landscape is the maturity of Turkey as a significant regional energy power. By the next decade, if a significant east-west corridor has been established, then Turkey would essentially become a gatekeeper to the EU for these new gas suppliers. It would therefore be rivaling Russia as an energy port to Europe. While this means that the EU will have successfully achieved a diversification in its gas suppliers, it would also mean that once again the EU would be significantly dependent on another country for its energy sources. Although the EU

[115] Op. cit., Dr. Christian Koch, April 9, 2014.

would definitely still maintain Russia as an energy supplier, which would create a competitive environment between Turkey and Russia in terms of 'gatekeepers' to the EU gas market, this scenario still creates a security concern for the EU. This is because an unstable Turkey could lead to significant energy disruptions for the EU. Therefore part of the EU's energy security policy would have to be an interest and active pursuit of a politically and physically stable and secure Turkey.

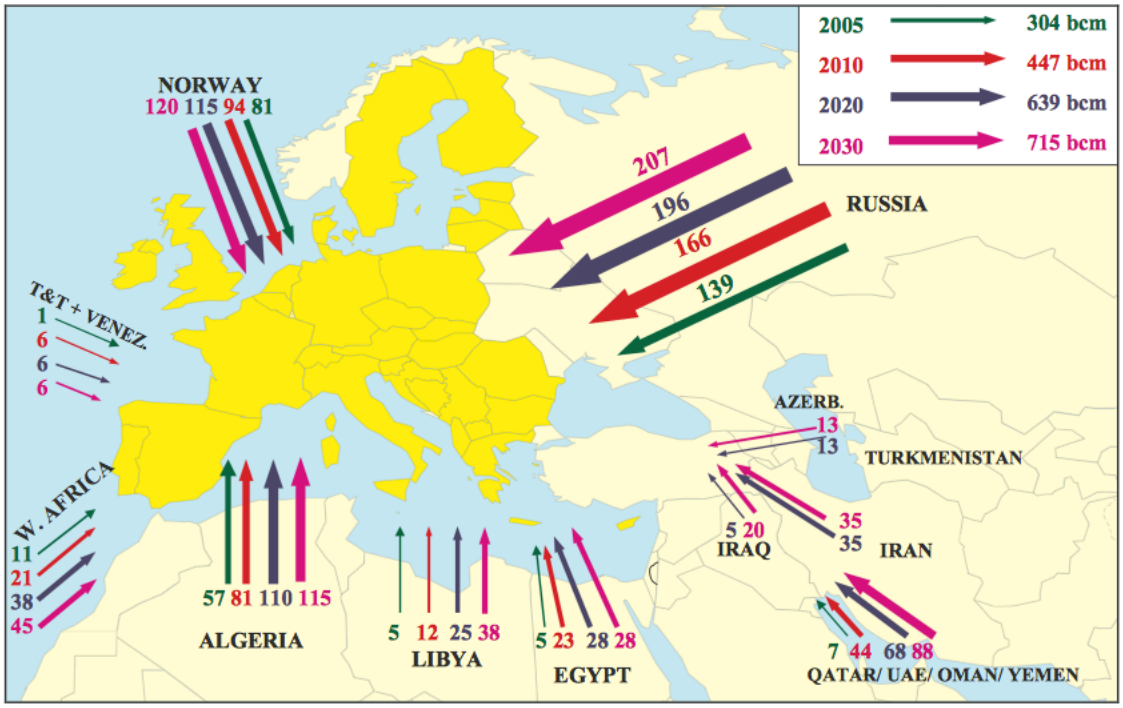
4.4.3 Long-term (2030-2050)

The long-term energy security outlook for the EU is still open for debate, as the EU would most likely still rely quite significantly on fossil fuels, and therefore it would depend on its oil and gas suppliers for a stable economy. By this point it would be safe to assume that a shift in the share of gas supplied by EU energy partners will have occurred. Russia will still be a significant partner, and while the goal of the current EU energy security and energy diversification policies is to diminish reliance on Russian gas, it is not to abandon it either as Russia has too important of a geostrategic advantage in the EU gas supply market for the EU to simply abandon this relationship. Rather, it can be expected that the Russian share in EU gas supply will have dropped from 33% in 2011 to roughly 20% - 25% by 2030, as indicated by figure 4.4.3.1[116] This map which projects future gas supplies to Europe also illustrates the importance that the east-west corridor will play in diminishing Russian gas supply dominance.

The importance of the Middle East as a potential future player in the EU energy supply market in the long-term is key to also developing a transition from natural energy resources dominated energy mix to one more focused on RES. By 2050, the EU has set a goal to significantly diminish its impact on the environment, as well as its consumption of fossil fuels. A shift towards RES will help it achieve this goal, however this would have to be accompanied by a phase-out plan of a reliance on external sources for its energy. What the EU could therefore do, as DR. Koch suggested will happen between the EU and Persian Gulf, is a reciprocal energy relationship. This would mean that there would a reverse flow in energy

[116] Op. Cit., Hafner et al.,2008, 14.

between the EU and its former suppliers. It would therefore supply these energy partners with technological know-how on the development of RES. While RES is not a geostrategic type of energy, as it can be set up in most parts of the world regardless of location, this reversal of relationship would help the EU to maintain economic relationships with its former energy suppliers.



Source: OME

Figure 4.4.3.1 – Gas export potential to Europe from neighboring natural gas producing regions. (©OME, 2008).

While this is a possible scenario, various events can occur within the next 30 years that would nullify this theory. However, returning to the original concerns of EU energy security, figure 4.4.3.2[117] indicates the future potential gas production numbers for various regions of interest to the EU. Looking at the table, the observation can be made that while the EU would certainly have to make decisions on who to embrace as an energy partner in the interests of energy security, there will certainly be plentiful supplies of gas to ensure that the EU economy can prosper without the concern of running out of essential natural resources before RES have been sufficiently evolved to allow a relaxation of dependency on natural gas.

[117] Ibid, 14.

Table 2 Gas supply potential to Europe-34 by exporting country, projections to 2030

	2005			2010			2020			2030		
	Production	Exports	…to Europe	Production	Exports	…to Europe	Production	Exports	…to Europe	Production	Exports	…to Europe
Norway	**87**	**81**	**81**	**105**	**98**	**94**	**114**	**125**	**115**	**140**	**130**	**120**
North Africa	**143**	**78**	**67**	**214**	**131**	**116**	**293**	**179**	**163**	**353**	**203**	**181**
Algeria	91	65	57	123	91	81	160	119	110	176	125	115
Egypt	41	8	5	68	26	23	93	33	28	122	38	28
Libya	11	5	5	23	14	12	40	27	25	55	40	38
West Africa	**22**	**12**	**11**	**54**	**38**	**21**	**136**	**105**	**38**	**171**	**130**	**45**
Angola	1	0	0	8	7	0	9	7	2	17	14	4
Nigeria	21	12	11	46	31	21	127	98	36	154	116	41
Russia	**641**	**223**	**139**	**690**	**265**	**166**	**776**	**369**	**196**	**890**	**446**	**207**
Caspian	**147**	**52**	**0**	**240**	**136**	**0**	**297**	**167**	**13**	**344**	**192**	**13**
Azerbaijan	6	0	0	18	7	0	35	20	13	38	20	13
Kazakhstan	22	6	0	46	27	0	68	40	0	87	50	0
Turkmenistan	62	46	0	106	90	0	122	100	0	147	120	0
Uzbekistan	58	0	0	70	12	0	72	7	0	72	2	0
Arabo-Persian Gulf	**203**	**49**	**7**	**394**	**177**	**44**	**711**	**340**	**108**	**901**	**405**	**143**
Iran	101	4	0	165	43	0	298	106	35	358	114	35
Iraq	2	0	0	7	2	0	25	12	5	50	25	20
Oman	18	11	2	23	14	2	27	14	2	32	14	2
Qatar	44	27	5	142	102	36	278	188	60	355	232	80
UAE	40	7	0	47	8	0	69	12	0	86	12	0
Yemen	0	0	0	10	8	6	14	8	6	20	8	6
Latin America	**56**	**14**	**1**	**86**	**38**	**6**	**123**	**63**	**6**	**134**	**68**	**6**
Trinidad and Tobago	28	14	1	35	23	6	47	37	**6**	43	37	**6**
Venezuela	28	0	0	51	15	0	76	26	0	91	31	0
Total	**1300**	**509**	**305**	**1783**	**883**	**447**	**2450**	**1348**	**639**	**2933**	**1574**	**715**

(1) Russia exports in 2005 include 4 bcm from former FSU Republics
(2) The assumption made in this study is that Kazakhstan, Turkmenistan an Uzbekistan will not be able to sell their gas directly to European markets but rather to Russia which could resell part of it to Europe. Central Asian gas exports have therefore been accounted for in the Russian export potential.
Source: CEDIGAZ (2005 figures) and OME (projections)

Figure 4.4.3.2 – Gas supply potential to Europe by exporting country and region, projections through 2030. (© OME, 2008)

5. Conclusion

The energy policy of the EU is a central pillar of the community that not only supports the EU economy, but also the security of the Union. It is for this reason that it is so crucial for the EU to develop mechanisms to protect it from being dominated by an oligopoly of energy suppliers while also keeping in mind the importance of having a balanced energy consumption mix as well as a balanced energy supplier portfolio. Various scenarios could play out in the coming future when it comes to the development of the EU energy policy, however certain forthcoming trends can be identified to be impacting the regional energy geopolitics.

Most importantly, it is important to realize that despite its best efforts, the EU will never be able to completely rid itself of Russian influence on its energy security or energy supply. It might be able to reduce direct influence, but indirect influence will always be present due to Gazprom's involvement in

various regions, such as in Israel's Leviathan field. Furthermore, another crucial trend that can be identified is the rising importance of Turkey as a strategic partner for the EU as it will act as a 'gatekeeper' to the EU energy market, similarly to the role that Russia has had over the last few decades. However, Turkey would not have the same degree of influence on its neighbors' energy supply as Russia has, as it would act as a middleman, instead of as a supplier. In order for the EU to gain access to the Middle East, Persian Gulf, Levant Basin, or Caspian regions, without using Russia as an access point, the EU will have to make Turkey a strategic priority as it will play the vital role of becoming a major energy port to Europe.

A further trend that can be identified is both the development of a southern energy corridor to the Middle East and Persian Gulf, as well as an east-west energy corridor to the Caspian. These are two crucial energy regions that the EU will most likely embrace in order to expand its energy supplier portfolio. A consequence of the development of this corridor would be a renewal in energy relationships between the EU and Iran, as the Turkish access point would allow for an energy partnership to develop. This partnership would however not be possible without the support of the US, which would be another identifiable trend in the future development of the EU energy policy. This is because the successful execution of an energy policy focused on energy security and diversification would require a multilateral approach towards a reform of energy partnerships. If the US wants to maintain a status of being a world hegemonic power, it must influence world energy relationships and dependencies. It therefore follows that the US would also get involved in the EU energy policy.

Lastly, a likely trend that can be observed as a consequence of the EU energy policy is that there will be an increase in the reliance of LNG as an alternative to pipeline gas. This is because of the flexibility offered by LNG to not be tied to a single supplier. An initial energy partnership with Qatar will help to push this adoption towards LNG, but it will not remain exclusive to Qatar as a supplier of LNG.

The EU energy policy is something which is at the heart of the development of the Union, however due to existing geopolitical energy relations, it is not easy to adopt a new policy within a few

months or even one or two years, as Dr. Furfari explains: “Change will not come easily as it will take tens of years to change the track of the EU energy policy. This is because it will take space, time, and capital to develop this energy policy”.[118]

[118] Op. cit., Dr. Samuele Furfari, April 10, 2014.

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