CHARLES UNIVERSITY IN PRAGUE
FACULTY OF SOCIAL SCIENCES
INTERNATIONAL ECONOMIC AND
POLITICAL STUDIES

MASTER'S THESIS

THE GEOPOLITICS OF GAS
TRANSPORTATION
OF CONTEMPORARY RUSSIA

(CASE STUDIES OF NORD STREAM AND
SOUTH STREAM PIPELINE PROJECTS)

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The proposed title: The Geopolitics of Gas Transportation of Modern Russia (Case Studies of Two Pipelines).

Project outline: There is no doubt, that the access to natural resources provides additional advantages for the future country’s development. What is more, some group of resources (such as natural gas) is not resources like any others – it can be classified nowadays as a specific group, namely: the strategic ones. Consequently, a country which holds sufficient reserves of geostrategic resources and has a possibility to develop them can pretend to play an influential role in the geopolitical field. Gas prices, the trade conditions have become significantly influenced by political desires and aspirations and it seems that every country recognizes these rules of the geopolitical game.

One of the arguments of the current work is the acknowledgment that Russia is playing such a role in Europe and doing all the possible to maintain this order in the future. On the one hand, the country has the “predisposition” to it by the fact of its geographical location. According to the data available¹, by the end of the year 2008, the largest share of the world natural gas resources belonged to the Russian Federation (23.4 % of total). Besides this, major trade movements by pipeline to Europe were from Russia. On the other hand, Russia is interested in the “return” to it the status of superpower, which was lost by the country after the disintegration of the USSR. In my opinion, the gas geopolitics in Europe is seen by the Russian Federation as the possibility to gain this status back through the system of pipelines, being almost monopolistic gas supplier in the region. So, Russia due to it geographical position and

its ambitious claims became an actor which impossible to ignore in the geopolitical game.

Another one argument of the thesis to look at is the fact that Russian aspirations became in geopolitical opposition with interests of the European Union and the United States. Both the US and the EU for the different reasons seek to decline European dependency from the Russian gas. On the one hand, faced up with the irregularity of gas supply, the EU is trying to diversify gas streams. On the other hand, recognizing the importance of the Eurasian region in the geopolitics and declaring interest in a “free circulation of hydrocarbons”, America is trying to keep its current leading position by preventing Europe from the Russian “imperial” ambitions.

It became clear, that Eurasia (as well as it part) is still the object of interest of a number of geopolitical actors. The main feature of the current situation that arms race has been replaced by ‘pipelines race”: issues of “rival” pipelines (“Nord Stream”, “South Stream” and “Nabucco”) will be analyzed as steps of gas geopolitics in the region.

The supposed structure of the thesis:

- Abstract
- Contents
- List of abbreviations
- List of tables/figures
- Introduction
- Literature (source) review
- Research methods
- Theoretical considerations [the neorealism approach: issues of the defensive realism and the energy security]
- Natural gas markets [description of the international, European, Russian gas markets, as well as gas markets of Turkmenistan and Azerbaijan]
- Competeting pipelines [issues concerning “Nord Stream”, “South Stream”, “Nabucco” projects]
- Conclusion
- Summary abstract
The intended methodology of the thesis:
I am going to implement a combination of the following methods:
Firstly, it is the *case study method* (accompanied with the event analysis) which will help with providing a wide range of information and the theoretical explanation concerning plans/aims of the pipelines construction;
Secondly, *data analyzing method* which is useful for evaluating of descriptive statistical data (about the natural gas reserves, its production, consumption etc) and for presenting additional points to the arguments of the thesis;
Finally, it is the *method of comparative analysis*, which on the basis of the results received after the previous methods applying will help to produce a better perspective for the studied issues.

Bibliography:
In order to develop arguments of the thesis and provide the basis for the contemplated methods, I am going to use a number of literature sources, including newspapers, journals, websites, Government publications, and statistical data (collected by different agencies). The contemplated groups of resources are following:

Primary sources:

*BP* (Global.
http://www.bp.com/bodcopyarticle.do?categoryId=1&contentId=7052055;
President of Russia web – pages. http://eng.kremlin.ru/;
Secondary sources:


“EU Must Push Russia”.


I hereby declare that this thesis is my own work, based on the sources and literature listed in the appended bibliography. The thesis as submitted is 179,640 keystrokes long (including spaces), i.e. 74 manuscript pages.

Veronika Sorokina  
26th May 2010
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<table>
<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td><strong>Bcm</strong></td>
<td>Billion cubic meters</td>
</tr>
<tr>
<td><strong>CIS</strong></td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td><strong>Concept</strong></td>
<td>Foreign Policy Concept of the Russian Federation</td>
</tr>
<tr>
<td><strong>cons.</strong></td>
<td>Consumption</td>
</tr>
<tr>
<td><strong>EEZ</strong></td>
<td>Exclusive Economic Zone</td>
</tr>
<tr>
<td><strong>Energy Strategy</strong></td>
<td>Energy Strategy of Russia until 2020</td>
</tr>
<tr>
<td><strong>EU</strong></td>
<td>European Union</td>
</tr>
<tr>
<td><strong>exp. vol.</strong></td>
<td>Export volume</td>
</tr>
<tr>
<td><strong>FSU</strong></td>
<td>Former Soviet Union</td>
</tr>
<tr>
<td><strong>LNG</strong></td>
<td>Liquefied Natural Gas</td>
</tr>
<tr>
<td><strong>n/a</strong></td>
<td>Data or information not available</td>
</tr>
<tr>
<td><strong>NATO</strong></td>
<td>North Atlantic Treaty Organization</td>
</tr>
<tr>
<td><strong>prod.</strong></td>
<td>Production</td>
</tr>
<tr>
<td><strong>RF</strong></td>
<td>Russian Federation</td>
</tr>
<tr>
<td><strong>RUR</strong></td>
<td>Russian rubles</td>
</tr>
<tr>
<td><strong>START</strong></td>
<td>STrategic Arms Reduction Treaty [on measures for the further reduction and limitation of strategic offensive arms]</td>
</tr>
<tr>
<td><strong>Security Strategy</strong></td>
<td>Strategy of the National Security of the Russian Federation until the Year 2020</td>
</tr>
<tr>
<td><strong>TEN – E</strong></td>
<td>Trans – European Network – Energy</td>
</tr>
<tr>
<td><strong>Tcm</strong></td>
<td>Trillion cubic meters</td>
</tr>
<tr>
<td><strong>US</strong></td>
<td>United States</td>
</tr>
<tr>
<td><strong>US $</strong></td>
<td>US dollars</td>
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INTRODUCTION

Energy issues are of growing interest in the modern world. Ever since the Industrial Revolution, energy and the need to secure its supply have been fundamental to any position of power in the world. If we turn our eyes upon the last century, we will find out that the problem of energy security were burning questions during the World War II, when a number of states have suffered from the lack of energy resources. Later, the 1973 oil crisis and the Iran – Iraq War, on the one hand, have emphasized the growing energy dependence of Europe, and, on the other hand, become the crucial moments for including problems of energy security in agendas of individual European states. Afterwards, the Persian Gulf War, the Iraq War, the Gas Disputes between the Russian Federation and Belarus and Ukraine have intensified the feeling that the current age can be recognized as the era of “hydrocarbon man”. The era, which is characterized by the strikingly opposite interests of energy owning and/or producing countries and energy consuming ones. Besides this, there is a distinct aspiration of some countries with sufficient energy reserves to use them as weapons in promoting state’s geopolitical interests. At the same time, despite the rising role of energy in influencing state’s national security, regime development, domestic and international politics, it is known that the professional journals in political science and international relations have not paid the sufficient attention to publishing research on these topics; themes, which have been examined in this respect, have been mostly devoted to research to the impact of oil. In contrast, this work will be devoted to the analysis of the relationship between politics and natural gas originated from the Russian Federation (the country, which is supposed to be one of the most influential actors on the energy source markets).

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While analyzing relationship between politics and energy it is important to notice that specific role of natural gas in influencing the politics. There are a few important characteristic features\(^5\) of natural gas. First of all, there is a direct link between gas producers and consumers, which is actively used for the producer’s state policy implementation. Secondly, it is the fact that natural gas in not a fungible commodity in comparison with oil. Taking into consideration the information that the former is the world’s fastest growing energy source, which (if current trend remain the same) will become the leading global energy source, it is logical to suppose that natural gas could be able to play much more significant role in politics in the nearest future.

The aim of the first part of this work is to analyze which principles and ideas have influenced the foreign and security policies of the Russian Federation, what is supposed to be the state’s national interests and security problems, how Russia sees itself in the world affairs and global energy supply, which steps the country is going to undertake in the future for its strategic interests promoting, and - what is more important in the framework of this study - which place will take energy resources (namely, natural gas) in the Russian geopolitical aspirations. In order to answer these questions, in the first chapter of the thesis I am planning to develop my hypothesis that the contemporary Russia understand the national power in its neo(realist) meaning (including sphere of energy sector) and that the state is going to exploit the link between energy resources possessions and its national security and foreign policy’ tasks in the future.

The goal of the second part of the thesis is to evaluate the reasonableness of the desire of the Russian authorities to use the dependency of other countries and/or regions from the Russian natural gas reserves for its strategy’s implementations. For this reason Chapter 2 will be dedicated to the analysis of the international natural gas markets, as well as to markets of the European Union and the Russian Federation. This situation will be examined on the base of the statistics concerning the volumes of proved natural gas reserves, amounts of natural gas produced, consumed, exported and imported. Here I would also like to notice, that even though trade movements of liquefied natural gas (hereafter, LNG) in the year 2008 were significant in volumes

\(^5\) Shaffer, 10, 13. Throughout the extent of the current chapter and until the further notice I am quoting piece of information available at the monograph mentioned in this reference.
Introduction

(587.26 billion cubic meters\(^6\)) and it is expected that the world LNG demand will increase on 2.6 times in the year 2020 (in comparison with the data at the end 2005)\(^7\), in the framework of the current study will be analyzed the trade movements of gas by pipeline only. Additionally, taking into consideration the plan about the construction of the rival to the Russia Nabucco pipeline, natural gas markets of Azerbaijan and Turkmenistan\(^8\) (which are supposed to supply this pipeline with gas) will be analyzed. Furthermore, steps of the Russian Federation to reach long – term gas purchase agreements with Turkmenistan and Azerbaijan for creating the additional problems for Nabucco project realization and providing other advantages for Russia in the foreign policy implementation will be presented. As well as this, the investigation of the complicated contemporary gas relationships between the Russian Federation and the European Union and the forecast of their development in the future will be provided.

The primary object of the third chapter of the thesis is to examine how the Russian Federation is going to respond on the actual European fear to be dependent from natural gas disputes between Russia and transit – states and on the want of the European Union to diversify natural gas supply resources and their routes. In the framework of this part of the thesis case studies of the two new natural gas pipelines projects (Nord Stream and South Stream) promoted by Russia will be analyzed. Besides the basic projects’ characteristics I am planning to investigate and outline


\(^8\) According to the information available about the Nabucco gas pipeline project (“Markets and Sources for Nabucco”, Nabucco Gas Pipeline Project, 05 May 2010 <http://www.nabucco-pipeline.com/company/markets-sources-for-nabucco/markets-sources-for-nabucco.html>), natural gas from Azerbaijan, Kazakhstan and Turkmenistan (among other countries) are considered to be sources for this pipeline. Natural gas markets of Azerbaijan and Turkmenistan I have chosen for the analysis mainly for two reasons. First of all, these countries should be located in the different, but close to Russia regions (in order to examine the relationships between these countries and the Russian Federation). Similarly, Azerbaijan was chosen as the country from the Caspian Sea region, Turkmenistan - from the Central Asian region. Secondly, while deciding between Turkmenistan and Kazakhstan (as countries, situated in the same region), I have tended to the former as the state with much more sufficient natural gas reserves and, consequently, the better possibility to compete with Russia in this respect (proved natural gas reserves at end 2008 in Turkmenistan constituted 7,94 trillion cubic metres, while in Kazakhstan – 1,82 trillion cubic meters only – data available at: “BP Statistical Review of World Energy. June 2009”. British Petroleum Global, 10 May 2010 <http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2008/STAGING/local_assets/2009_downloads/statistical_review_of_world_energy_full_report_2009.pdf>).
declared and true geopolitics goals of the Russian Federation connected with the new pipelines’ construction. Moreover, in this chapter I will show the principles of “dividing” politics of Russia in this respect, namely: the relationship with which European states the Russian Federation is defining for itself as priority and the claims of which of them could be ignored to some extent. Additionally, I will analyze which economic and political risks associated with the dominant position of Russia on the European natural gas markets the European states are going to overcome and, correspondingly, which moves the Russian Federation is undertaken in order to promote its strategic interests. Finally, the possible development of event connected with the new natural gas pipeline construction will be examined.
LITERATURE REVIEW

In order to develop a theoretical and conceptual frameworks of my study, as well as to obtain answers to the research questions outlined in the introduction of the thesis I have chosen a number of resources, which can be grouped as primary and secondary ones. The primary sources include statistics, government documents, and results of research studies, proceedings of conference or meetings, and interviews with political leaders and other participants of events, important in the framework of the current study. The group of secondary sources consists of analysis, interpretations and reviews of sources defined as primary ones.

First of all, for providing a theoretical background to the thesis I am planning to explain why I consider realism and neorealism (structural realism) to be the prevalent conceptions in the contemporary international relations. Selected pieces of literature by the prominent researchers and authors of the (neo)realism theory (such as Hans J. Morgentau, Nicholas J. Spykman, Kenneth N. Waltz, Robert Jervis and John J. Mearsheimer) will help me to identify issues (which I believe to have the permanent and never – ending actuality), related to the problems of national interests promoting, state’ security, power politics and the views on the suitable amounts of power needed in order to ensure the state’ survival in conditions of international politics. In addition to this, for confirmation of my idea that the realistic and neorealistical principles have been reflected in the foreign and security policies of Russia, I am planning to pay attention to the analysis of the following laws in force, namely: “The Foreign Policy Concept of the Russian Federation” and “The Strategy of the National Security of the Russian Federation until the Year 2020”. Personally, I think that scrutiny of such documents is helpful in identifying state’s strategic priorities and interests, and instruments (means), which the state is going to use for the pursuing its policies. Besides this, the investigation of the Russian government publications mentioned above is irreplaceable for understanding, that the Russian Federation sees its energy resources possessions as the effective lever for the foreign policy promoting and as a tool for security goal implementation and, what is more, it was assigned and justified by law.
Secondly, for the developing of the conceptual framework of the thesis, I am going with the help of statistical data to investigate the situation on the natural gas markets of the world, as well as of these of the European Union, Russia, Turkmenistan and Azerbaijan by the end of the year 2008. Additionally, I am planning to determine the level of dependency of the European Union’ countries from the natural gas export in the whole and from the Russian natural gas in particular. Similarly, the evaluation of the position of the Russian Federation on the global natural gas market and the forecast the possible development of the relationships between the Russian Federation on the one hand, and the European Union, and for another hand will be presented. In order to fulfill these tasks I am planning to use the data available from the statistical reviews provided by the number of sources: British Petroleum, the European Commission’s Directorate – General for Energy and Transport, Eni S. p. A. and many others. I realize that all the data can have some extent of reliability problem, at the same time, the information from the British Petroleum web page I am going to use in the overwhelming majority of cases. The first reason for choosing British Petroleum as the main statistical source is that it is widely recognized as the most authoritative and reliable. Another one reason to resort to the British Petroleum’ statistics (even in the description of the Russian natural gas market) is the necessity of data comparability. The fact that the Russian gas company Gazprom uses another one standard for the gas reserve size evaluating, which takes into account only the possibility of natural gas “presence” in deposits, while international standards evaluate also the economic effectiveness from the reserves’ extraction, makes impossible to compare data received from the different sources.

Thirdly, analysis of opinions of Sandra Kalniete and Loyola de Palacio (politicians, who were engaged in work on energy issues on the European Commission’s agenda), review of official documents of the European Union and the Russian Federation (The Energy Strategy of Russia until 2020 and The 2006 Green Paper – A European Strategy for Sustainable, Competitive and Secure Energy), accompanied with the results of researches provided by the analytics and experts of Europe’s and Inogate Energy Portals, RIA Novosti and other sources are helpful in the forecasting the future relationships between Russia and the European Union as a

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9 The difference between these two methods in gas reserves’ evaluation between the methods can be seen in the section “Reserves” at the Gazprom’s web page: “Gas Resources”, Gazprom, 05 May 2010 <http://www.gazprom.com/production/reserves/>. 
gas consumer and Turkmenistan and Azerbaijan as gas exporters and possible gas delivers to the rival Nabucco pipeline.

Afterwards, the next part of the thesis will be devoted to the investigation of objects, which Russia is pursuing or declaring to reach by the promoting of the Nord Stream and South Stream pipelines, which steps and actions have been already undertaken toward the attaining these goals and how the Russian gas geopolitics intentions are received and evaluated by the transit – states, member – states of the European Union and the United States. In order to draw a complete picture and benefit from the examination of arguments presented from owing – and/or producing – countries and consuming – countries perspectives, I am going to appeal not only to the official information available on the web pages of the President and Prime – Minister of the Russian Federation and companies, responsible for pipelines’ construction, but also to the actual reviews by the independent Russian and foreign media sources, such as Radiostantsija Echo Moskvy, The International Oil & Gas Newspaper, Interfax, RIA Novosti, The Economist, BBC News and others. I believe that such selection of sources will help to investigate the issues which deal with new gas pipeline construction from different points of view (the Russian – logically positive and western ones – understandably watchful) and provide the base for their critical evaluation. Besides this, the monographs and review of a number of scholars and researcher (such as Brenda Shaffer, Edward Lucas, Gregory R. Copley) supplemented with materials of the studies by the Center for Strategic & International Studies, Länder – Analysen, Institute of International Relations and Political Science of Vilnius University, East European Gas Analysis will assist me in the realization of my aim, namely: to carry out facts – based and critical study of the geopolitics of gas transportation in contemporary Russia.
RESEARCH METHODOLOGY

In order to research the chosen field of study, this work will make use of a combination of the following methods, namely: data analyzing method, method of comparative analysis and the case study method. In my point of view, these methods will be useful in identifying the key research issues, bringing together strands of argumentation, providing base for investigating ideas, evaluating the results of study, and, after all, they are indispensable for the making progress in a field.

To begin with the data analyzing method which is absolutely irreplaceable in discovering cause – and – effect relationships between the energy resources possessions (in our case – natural gas reserves) of different countries and/or group of countries and their place in the world global energy market. Answering to this purpose of the thesis, the analyzing data will be grouped so that to identify the situation on the international gas market, as well as on gas markets of the European Union, the Russian Federation, Azerbaijan and Tajikistan (the reason for choosing this very regions has been already presented in the introduction to the thesis). First of all, each of the examined regions will be evaluated with the help of statistics presenting the volumes of proved natural gas reserves. Furthermore, the analysis will be supplemented by the indicators of amounts of natural gas produced and consumed and volumes and directions of exported and imported gas in order to determine the advantages and disadvantages of every single region in this respect. In addition to the data presented, a number of graphs and charts will be used in order to introduce the descriptive statistics in a visible, clear and understandable way. On balance, all the forms of data analysis which I am going to apply in the thesis will be implemented not only for the providing an overall picture of the world global energy market but also will be organized so that useful information can be extracted from it.

Similarly, the previous described method will present a sufficient base for the implementation of the method of comparative analysis. The comparison, correlation and contrast that will be made across the statistical data under analysis will help to evaluate the natural gas producing, importing and/or exporting potentials of the European Union, Turkmenistan, Azerbaijan and the Russian Federation. Moreover, it
will show up clearly the reason for the visible role of Russia on the world energy market, to determine the extent of dependency of the European Union from natural gas import in the whole and from import of natural gas from the Russian Federation in particular (five groups of dependency will be presented). What is more, in my point of view, it will provide the additional (expressed in figures) grounds for understanding the reasonableness of the Russian authorities to use the dependence of European countries from the Russian natural gas for its foreign policy implementing and the strengthening its power. In order to make the analysis and subsequent conclusions more reliable and well – founded, I find logically to compare and summarize not only the statistics available at the end of the year 2008, but also the data for the period from 1994 to 2008 in order to clarify tendencies and trends of national and/or regional natural gas markets’ development.

Additionally, in order to complete the empirical part of my thesis, the case study method (accompanied with the event analysis) will be used. I believe that this method will be indispensable for providing a wide range of information and analysis concerning the intention of the Russian Federation to put into practice the Nord Stream and the South Stream natural gas pipeline projects as consecutive steps of the Russian gas geopolitics in the European region. The method allows focusing on the basic project’s characteristics and, what is more important, on the preceding events, which “force” Russia to work out the issues of the pipeline constructions and on the declared and real aims, which the state is pursuing or pretending to reach. Moreover, this method is really useful in investigating the ways of project’s implementation and promoting, for analyzing the means of competition employed by Russia towards the rival project and states – competitors and understanding why the actions of Russia toward its goals remain successful (at least, at the time of the thesis’ writing). Besides this, in the framework of the case study method I am planning to determine and forecast the possible development and consequences of the projects’ realization (for instance, how the plans of Russia will influence its relationships with the transit – countries, and some member – states of the European Union).

As limitations of the data analyzing method and method of comparative analysis I would like mention the fact that they are based (in the majority of cases) on the statistics from the only resource though very famous and respected: British Petroleum. The considerable degree of the subjectivism of conclusions provided can be assumed - to a certain extent - as the limitation of the case study method.
CHAPTER 1.

REALISM AND NEOREALISM AS THE GUIDANCE IN THE MODERN INTERNATIONAL RELATIONS.

My main research questions will be presented in the chapters 2 and 3. In order to make them more clear and understandable I will devote the current part of the thesis to the brief description of realism and neorealism as the prevalent conceptions of the contemporary international relations and the way in which it influences the modern foreign policy of the Russian Federation (hereafter, the RF). Taking into the account the fact that the realistic theory is a thorough one, I am going to concentrate on the issues which are related to the problems of national interests, security, and power politics only.

1.1 Realism and Neorealism in Theory.

Realists describe the international system as an anarchy which shows itself in the absence of the common government (central power) which enforce norms for all. As a result of it, the interaction of the states is very chaotic. Besides this, realists believe that the very existence of the state is dependent on the punctual and efficient following of its interests, which can be defined by the geographical conditions, egoistical human nature, traditions etc. In the conditions of anarchy the most important problem for the state is to determine which foreign policy will answer better to its national interests. According to Hans J. Morgentau, “the main signpost that helps political realism to find its way through the landscape of international politics is the concept of interest defined in terms of power”\(^\text{10}\). Logically, that the state tends to obtain the maximum of power, which helps it to achieve security: than more power the state has than more secure it “feels” in the conditions of anarchy.

It is obvious that national interests of different states opposite each other. Thus, interstate conflicts and even wars become dominating process on the international

Chapter 1. Realism and Neorealism as the Guidance in the Modern International Relations

Facing up with the regular threat of the national interests, the state is always anxious about its security and trying to protect it with the help of strategy and diplomacy, both of which are based on power. Consequently, the phenomenon of power is seen by the realists as the base and the goal of foreign policy for every state.

Moreover, each state, on the one hand, is interested in the consolidation and the expansion of its power and opportunities. For another hand, each state is trying not to allow the situation when the power of its rivals exceeds its own in such an extent that it becomes dangerous for the state’ security. Thus, it can be said that states are looking for a balance of power (a system, which helps to avert the predominance of any state in this system). As Nicholas J. Spykman put it: “The truth of the matter is that states are interested only in balance which is their favor. Not an equilibrium, but a generous margin is their objective. [...] The balance desired is the one which neutralizes other states, leaving the home state free to be the deciding force and the deciding voice”\(^\text{11}\).

It is widely accepted fact that realism was the dominating theory in international relations in 1940 – 1970s. Not surprisingly, because realists’ main ideas about the interaction and rivalry of the states at the international scene reflected realities of the World War II and the Cold War. Changes in world (and especially in Europe) which were influenced by trade development, co – operation and integration processes led to the situation when it became harder to explain the existing world order in the framework of classical realism. As the result of the demand of time, realism has started to change and by the end of the 1970s neorealism (structural realism\(^\text{12}\)) was formed.

Neorealism also operates with the power category, however does not concentrate on the military aspect only (as realists does). As Kenneth N. Waltz mentioned: “The economic, military, and other capabilities of nations cannot be sectored and separately weighed. [...] Their [states] rank depends on how they score


\(^{12}\) Kenneth N. Waltz (one of the founders of structural realism) believes that although it is necessary to study separate states (actors) in order to understand the essence of international relations, at the same time, it is impossible to explain the system of international relations basing only on characteristics of these separate actors or even groups of actors. The decisive and determinative significance in the international relations plays the system of international relations itself, its \textit{structure}. It is precisely the structure, which predetermines the distribution of opportunities and potential between the states. (The definition of the structural realism was taken from: M. M. Lebedeva, \textit{Mirovaja Politika: Uchebnik dlja VUZov [International Politics: the Textbook for Higher Schools]} (Moskva: Aspect Press, 2007) 33; Italics mine).
on all of the following items: size of population and territory, resource endowment, economic capability, military strength, political stability and competence." On the whole, the combination of "items" is seen by states as the resources for gaining and increasing power in order to protect their own survival and security. Obviously, that the state with the greater power gains more advantages and interested in the protection of the current international situation. According to Waltz, there are four such benefits which greater power provides for its possessors. To begin with the wider margins of safety in comparison with the less power state and the opportunity to choose the game to play and rules to keep. Secondly, it helps with the means of ensuring one’s autonomy for the withstanding against force that others have. Thirdly, greater power allows the bigger scope of action while leaving the results of it uncertain. Finally, it provides a considerable stake for the power’ “owner” and the ability to take firm action for its sake.

Waltz also emphasizes the exceptional nature of international anarchy: there is a clear division between structures of domestic and international systems. While domestic system is seen as centralized and hierarchic, the international one is described as anarchic and decentralized. Therefore, the international system (in the absence of centralized authorities or ultimate institutions which can enforce international laws) is characterized by the lack of trust between states which in the (classical/neo) – realist paradigm is known as a “security dilemma”.

Explaining the problems which decision – makers, acting in the international system, have to solve in order to protect their interests, safety and power, Robert Jerwis stressed that the security dilemma is the only one of three problems which influences state’ foreign policy. To begin with the already mentioned security

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14 Waltz, 194 – 195.
15 Waltz, 88. Italics mine.
16 The security dilemma can be defined as a strategic problem in relation between states and other actors, which consists of two levels, subdivided on two related lemmas, which make decision – makers to choose between them. While the first (basic) level consists of dilemma of interpretation of the capabilities, motives of others, the second (derivative) level consists of a dilemma of response which is about the choosing the most rational and suitable way to react. For the detailed explanation see Paul D. Williams (ed.), “Security Studies: an Introduction”, *Knihy Google*, 26 Mar. 2010, <http://books.google.cz/books?id=YYYhFyELB8C&pg=PA141&lpg=PA141&dq=security+dilemma+definition&source=bl&ots=ApzW8_h2ZY&sig=j1lfcBK2CO0YAnSIYm1BoaK8j4&hl=cs&ei=jLWv83bNMfsAbD-dy1Dg&sa=X&oi=book_result&ct=result&resnum=9&ved=0CEgQ6AEwCA#v=onepage&q=security%20dilemma%20definition&f=false>.
dilemma, which is explained as the means which used by the state for increasing its own security and for decreasing the security of other actors (this situation would definitely disturb them). After, it is the potent fear of the dissatisfaction in the current balance of power by the other states (it is hard to say who would be leaders of neighbor states (as well as of the most powerful states in the world) in the future and how they could change their mind about the foreign policy’ priorities and whether their new foreign policy would have aggressive motives). Lastly, it is a problem as a result of some possible solution. In order to protect themselves, states seek to control resources or land which are outside their own territory (so called “ideological buffer zones”) and this could alarm others.

After the defining the meaning of power and its advantages for neorealists, as well as what they consider to be the main problems for the decision – makers to settle while acting in the international (anarchical) system, I think it will be logical to pay attention to the ways of solving such a difficulties and protecting actor’s power.

Although neorealists agree with the statement that actors have to operate in the self – help world being uncertain about intentions of others states, and that every actor seeks to ensure its own survival, there is a substantial disagreement among them about how much power for a state is enough. According to the views on the suitable “volume” of power needed and actions towards its possessing, there are defensive and offensive branches of neorealism can be distinguished.\(^\text{18}\)

Being the representative of offensive realism, John J. Mearsheimer, on the one hand, points out that power states should always be looking to gain as much power as possible in order to become hegemony, because it is seen as the best opportunity to survive and to be secure. Besides this, Mersheimer believes that moving toward this aim states should do everything possible and should constantly looking for ways to get advantages over each other.\(^\text{19}\)

For another hand, the defensive realist Kenneth N. Waltz affirms that whereas the main aim of the great powers is to increase their security, they need to undertake actions towards the decreasing of other states’ security only in cases when the risk of bringing down its own is insignificant. It can be said, that states are trying to maintain

\(^{18}\) The division of realism on “defensive” and “offensive” was proposed by professor John J. Mearsheimer.

the existing balance of power instead of destroying it. Furthermore, Waltz speaks about an appropriate amount of power: states should keep the carefulness and do not try to attain the excessive “amount” of power. If some state becomes too powerful, the coalition against it will appear and, as the result, this state could become less secure than it was before.\textsuperscript{20}

The examples of offensive policies of Imperial Germany, Nazi Germany, the Soviet Union (at the times of the Cold War) which were pretending to become hegemonic power, have shown that these states after all were not successful in their expansionists aspirations, and that the aggression is not the right way to make the state secure. I believe that nowadays great powers (including the RF) are tending to employ the defensive realism principles of neorealism, which provide moderate strategies for the national security ensuring.

1.2. (Neo)realism in Practice. The Russian Foreign and Security Policy.

Analyzing laws in force of the Russian Government concerning foreign policy and national security, one may noticed that Russia operates there with the categories of (neo)realism. For instance, there is an affirmation at The Foreign Policy Concept of the Russian Federation (hereafter, the Concept) that Russia starts to play from the beginning of the current century “the increased role [...] in international affairs” and has “greater responsibility for global developments and related possibilities to participate in the implementation of the international agenda, as well as in its development”\textsuperscript{21}. It definitely means that Russia sees itself as a great power with “a full - fledged role in global affairs”. Not surprisingly, that the country is planning to materialize the policy as the great power in the future: one of the declared country’s aims is preserving and strengthening strong positions in the world community that best reflects the interests of Russia “as one of influential centers in the modern world”.\textsuperscript{20}


\textsuperscript{21} The Foreign Policy Concept of the Russian Federation [approved by D. Medvedev, President of the Russian Federation on 12\textsuperscript{th} of April 2008], The Ministry of Foreign Affairs of the Russian Federation, 12 Jul. 2008, 27 Mar. 2010 <http://www.mid.ru/ns-osndoc.nsf/0e9272befa3420973256c630042d1aa/ce95560654d4ca5c32574960036cddb?OpenDocument>. From this moment and until the further notice (throughout extent of the current chapter) I am quoting the document mentioned in this reference.
Among the common for all states challenges and threats to settle (such as international terrorism, regional conflicts, spread of weapons of mass destruction, as well as a number of ecological, social, economic and security issues), the Conception points out on the necessity for the RF (as for the great power) to overcome some special problem, namely: “continued political and psychological policy of “containing” Russia”. In my opinion, the existence of the last problem can be easily explained from the (neo)realistic point of view. According to the Russian foreign policy – makers, the country is located in the epicenter of the struggle for power and being influential actor in the sphere of international relations, the RF faces up with the negative reaction of the “historic West”, which is interested in the preservation of its monopoly in global processes. There is no doubt that Russia is going to stand up its reviving international influence which is seen as the means for its national interests promoting. Understanding the national power in neorealist meaning, the RF proclaims its desire to promote “foreign economic interests and provision of political, economic, information and cultural influence abroad”. What is more, the decision – makers also declares that the country is going to use all the available economic and financial tools of the state in order to realize its interests.

It is absolutely clear, that the RF in its foreign policy acts according to the defensive realism principles. The first point in favor of this statement is that “Russia consistently calls for diminished role of the force factor in international relations”. Another one argument to put forward is the fact that the RF is intending to commensurate the use of military, political, economic, financial and other instruments with the real value of foreign policy tasks. Finally, the state tends to organize its relationship with NATO in a way of averting a danger of increasing one’s security at the expense of security of the RF. Thus, such declarations can be recognized as the intentions of Russia to solve the security dilemma problem and to decrease the possible outcomes of the dissatisfaction in the current balance of power by the other states.

When discussing the foreign policy of Russia it is much more interesting to determine how exactly (by which means) the RF is going to pursue this policy. According to the Concept, the state is going to undertake some economic levers. Trying, on the one hand, to overcome the resource - based dependence of the economy, for another hand, Russia is declaring about its readiness to use all available economic instruments and resources for protecting her national interests. To achieve
this goal, the state will continue to increase the potential of the fuel and energy industries to support its reputation as a responsible partner, and, at the same time, to facilitate development of own economy. Moreover, the RF reserves for itself rights for creating “favorable conditions for diversifying Russia’s presence in the world markets”, for taking trade policy measures in order to protect and promote interests of the country, and for active implementing the possibilities of regional economic and financial organizations in “the corresponding regions” in order to secure interests of the RF. The last one measure can be classified as an intention to create mentioned above ideological buffer zones in the CIS space\(^\text{22}\), which Russia traditionally includes in its “sphere of influence”. On the whole, it is obvious that the RF is going to use her natural resources as one of the most influential levers in the foreign policy implementation.

According to The Strategy of the National Security of the Russian Federation until the Year 2020\(^\text{23}\) (hereafter, the Security Strategy), Russian authorities understand that in the conditions of uneven distribution of natural resources between countries, the issues of energy resources possession will continue to be the object of the close attention in the international sphere. In this situation Russia (as the largest energy producer and exporter) sees as one of the main tasks of the state security the protection of the country from the following risks and threats, namely: the lost of control over national resources, the aggravation of the energetic source state, the deficit of the country’s fuel and energetic sources and the discrimination against the RF. From this point of view, energy sources possession is seen by Russia not only as the effective lever for the foreign policy promoting, but also as the tool for security goals realization when great powers implement against Russia policy of constraining.

Finally I would like to restate my opinion about unconditional and undisguised embodiment of realists’ power category by Russia (including sphere of energy sector). A convincing example of this is article by Sergei Lavrov\(^\text{24}\) (the Minister of Foreign

\(^{22}\) At present the CIS unites: Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.


Chapter 1. Realism and Neorealism as the Guidance in the Modern International Relations

Affairs of the RF from the year 2004), where he states that “energy is viewed in Russia as a strategic industry” and “it would be right to say that we view our role in global energy supply as a means for ensuring our foreign – policy independence”. As well as this, S. Lavrov bluntly answers on the criticism of Russia by the other states for her visible role in the global energy sector. According to him, it is just “a manifestation of complexes from countries that cannot reconcile themselves to their dependence on external sources of energy” and these countries are definitely “unhappy about a strong Russia”. 
The first chapter has showed the obvious link between energy resources possessions and national security and foreign policy in the contemporary Russia. What is more, the desire of the Russian authorities to exploit this dependence in the future is beyond all manner of doubt. For this reason the current chapter will provide analysis of the reasonableness of such aspirations in regards to natural gas resources as one of the major sources of global energy. Firstly, the chapter will provide the general description of the international and the European Union (hereafter, the EU) natural gas markets in respect of proved gas reserves, its production, consumption, and main export – import movements. Additionally, the analysis of the EU’s dependency from natural gas import (including that of from the RF) will be offered. After, the information concerning the present and future of Russia’s natural gas export trends will be presented. Taking into consideration the fact that suppliers of the rival Nabucco pipeline will be Turkmenistan and Azerbaijan, the third part of the chapter will focus on the natural gas producing and exporting potentials of these countries.

2.1. International Natural Gas Market.

According to the data available (see Figures 1, 2) the world proved natural gas reserves at end 2008 constituted 185.02 trillion cubic meters. The most considerable reserves were concentrated in Middle East region with its 75.91 trillion cubic meters (hereafter, tcm) or 41.0 per cents from total reserves. European and Eurasian common reserves were fixed almost at the same level, namely: 62.89 tcm and 34.0 per cents respectively. At the same time, the stockpiles of Asian Pacific and African regions formed 15.39 tcm (8.3 per cents) and 14.65 tcm (7.9 per cents) correspondingly. Natural gas stocks of North America and South and Central America did not exceeded 5.0 per cents each. As British Petroleum reported, the main gas fields “owners” in

the Middle East region were Iran (29.61 tcm or 16.0 per cents from total world reserves) and Qatar (25.46 tcm or 13.8 per cents) and in European and Eurasian region – the RF (43.3 tcm or 23.4 per cents).

Total amount of the produced natural gas came to 3.065,60 billion cubic meters (hereafter, bcm) by the end of 2008 year. Leader in natural gas producing was the RF with 601.70 bcm of gas produced which formed 19.6 per cents of total production. The second position was held by the United States with their 582.20 bcm (19.3 per cents) (see Table 1). Among other producers with more or less visible shares in global production can be mentioned Canada, Iran, Norway, Algeria, Saudi Arabia, Qatar, China, Indonesia, the United Kingdom, and the Netherlands.

The main consumers in the year 2008 were the United States and Russia with 22.0 per cents and 13.9 per cents of total world consumption respectively (see Table 2). Other considerable consumers in the same year were Iran, Canada, the United Kingdom, Japan, Germany, China, Saudi Arabia, Italy and Mexico. On the whole, 3.018,70 bcm of natural gas were consumed in 2008.

The most substantial export movements in the year 2008 were from the European and Eurasian region: 349.94 bcm of natural gas were exported and this constituted 59.6 per cents of total world export. Not surprisingly, that the main exporters in the mentioned region were the RF with 154.41 bcm, Norway with 92.78 bcm and the Netherlands with 55.00 bcm (the common share of these states in the total world export accounted for 51.46 per cents) (see Table 3 and Figure 3). Principal importers in the European and Eurasian regions in the same year were Germany (87.10 bcm of imported natural gas), Italy (75.31 bcm), France (36.66 bcm), the United Kingdom (35.42 bcm), and Turkey (32.30) (see Table 4 and Figure 4).

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26 Here I have listed countries with individual shares no less than 2.2 per cents in total natural gas production at end 2008. Countries were mentioned in the decreasing order of their shares. These countries in sum produced 29.8 per cents of total natural gas production in 2008 (for more information see Table 1).

27 Countries, enumerated in this paragraph in the decreasing order of their shares, had no less than 2.2 per cents in global gas consumption in 2008. The combined consumption of these countries accounted for 26.2 per cents of total world consumption (for more information see Table 2).


Another one perceptible region actively involved in export – import operations of natural gas was North America. According to the British Petroleum report\textsuperscript{30}, 130.59 bcm (or 22.2 per cents of total) were exported in the region. The main natural gas movements in 2008 were between Canada and the United States: Canada delivered to the US 103.20 bcm of natural gas.

On balance, it can be seen that Russia due to its considerable reserves of natural gas held one of the leading positions in world natural gas production, consumption, and in export and import operations.

\textbf{2.2. The Gas Market of the European Union}\textsuperscript{31}.

In this part of the thesis I would like to provide more detailed overview of the gas market of the EU by the end of the year 2008 as a result of its development in the last fifteen years.

According to the British Petroleum statistical review\textsuperscript{32}, the EU posed insignificant natural gas reserves: only 2.87 tcm or 1.6 per cents of the world proven reserves at end 2008. What is more, these reserves were declining steadily: from 4.21 tcm to 2.87 tcm between 1999 and 2008 (see Figure 5). Similarly, this trend continued in natural gas production in the region: there was a continuous decrease on 37.10 bcm in total from the year 2004 (227.40 bcm) till the year 2008 (190.30 bcm). The share of the EU in the global natural gas production in 2008 accounted at 6.2 per cents only\textsuperscript{33}.


\textsuperscript{31}The EU nowadays consists of the 27 member countries: Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom. It is widely known, that the European gas market cannot be classified as a common or monolithic: each of 27 national gas markets has its distinctive features (such as the shares of natural gas consumed or imported etc). Besides this, all these gas markets are rather independent politically – the EU does not have the common energy market (the national markets are ruled by the national governments). Despite these facts, in the framework of this work I suggest to analyse the EU as a unit, but a geographical one (in order to evaluate the significance and importance of the energy “capacity” of this part of the European continent, as well as the problems and perspectives of the EU’s energy security).


\textsuperscript{33}Own calculation according to the data presented in Table 4 and Figure 6.
The main producers of the EU region (by the end of 2008) were the Netherlands, and the United Kingdom (see Table 1).

On the other hand, if we accept the EU as the one unit, than it can be classified as the second largest consumer of natural gas in the world, with 16,2 per cents of the world’s total gas consumption in 2008. The consumption rose dramatically from 401,40 bcm in 1997 to reach 490,10 in 2008 (see Figure 7). The principal consumers of natural gas in the region (by the end of 2008) were Germany, Italy and the United Kingdom (see Table 2). It is also important to notice, that the portion of natural gas consumption in the EU’s total energy consumption (oil, natural gas, nuclear, coal, renewables) has rocketed sharply over the last three decades and it is supposed to continue its rise.

According to the data mentioned above, in 2008 the EU consumed almost on 2,6 times more than produced. The same distinction between producing and consumption can be seen from the Figure 8, which presents data for the period between 1994 and 2008. This exceeded consumption was the result of the significant amounts of import. Only in 2008 the EU imported 351,74 bcm of natural gas that accounted for 59,9 per cents of total gas imports. Thus, the EU (as a unit) could be classified as the biggest importer in the world. It is known, that the bulk of natural gas exporters to the EU (and which are located outside the EU itself) are the RF, Norway and Algeria. It would appear from the statistics, that in 2008 Algeria exported 23,34 bcm (6,64 per cents in total natural gas export to the EU), Norway delivered 92,69 bcm (26,35 per cents), and Russia supplied 124,92 bcm (35,51 per cents). These three countries in common exported 68,5 per cents of natural gas to the EU. What is more, as some researchers predicted, “on current trends, gas imports [from the RF, Norway and


35 Shaffer, 130.


Algeria] would increase to 80.0 per cents over the next 25 years”\textsuperscript{38}. Besides this, the share of the natural gas imported from Russia in the total gas consumption of the whole EU can also be mentioned as significant – it accounted for 25.49 per cents. Similarly, Russia is the most important external supplier of the EU.

Analyzing the obvious importance of the imported gas for the EU, it would be interesting to determine which countries of the EU and to which extent were dependent from import, including the Russian imported natural gas (by pipeline) in the year 2006. According to the statistics, provided by the European Commission’s Directorate – General for Energy and Transport\textsuperscript{39} and Eni S. p. A (an Italian multinational gas and oil company)\textsuperscript{40}, all member – states of the EU I suggest to divide into five groups on the base of the level of their dependence from natural gas import in the whole and from import of natural gas from Russia specifically: independent states, countries with less dependency, normal, high and full dependency. Thus, following six countries can be classified as independent: Cyprus, Malta – due to the absence of natural gas import; the United Kingdom – due to the insignificant dependency rate (10.0 per cents only); the Netherlands – because of stocks of natural gas and, finally, Denmark – owing to the absence of import and sufficient stocks of gas. Romania can be placed into the group of less dependent countries (30.0 per cents), Poland – to the group of highly dependent states. Other member – states of the EU were absolutely dependent from natural gas import in 2006 (dependency rates varied from 70.0 to 100.0 per cents). Concerning the dependency on natural gas imported from Russia in the same year, almost half from 27 countries of the EU could be recognized as highly dependent (Austria, the Czech Republic, Poland, Hungary and Romania) and as fully dependent (Bulgaria, Estonia, Lithuania, Latvia, Finland, Greece and Slovakia). Despite the fact of the considerable natural gas consuming capacity, France and Italy could be classified as countries less dependent from Russian natural gas and Germany – as a country with normal/middle dependency thanks to their diverse natural gas deliveries (for more information see Tables 5a and


5b). On the whole, the European Union is dependent from Russian natural gas import\(^{41}\) and this situation, aggravated by the number of recent disturbances in natural gas supply because of conflicts between the RF and Ukraine (as a transit country), has forced the member – states to think about the possible risk of supply failure in the future. As a result of it, securing of European energy supply takes an important position in the EU’s agenda. In order to achieve this goal, The 2006 Green Paper\(^{42}\) offers, for instance, to diversify suppliers, transport routes and transport mechanisms. Secondly, the organization of reliable partnerships between suppliers, transit and consumer countries is supposed to decline the risk of the energy dependency. Then, the improving of conditions for European companies seeking access to global resources as well as the provision of natural gas reserves are believed to decrease the supply failures. Additionally, the putting a new common policy into practice (with the common opinion on the energy questions) is suggested to help a lot in energy security providing. In my point of view, the embodiment of the last proposal could face up with some impediments. For example, the elaboration of a common policy towards main energy suppliers (such as Russia) could become a controversial issue, which would affect “gas relationships” in the future. The first thing to consider while discussing potential difficulties is the normal desire of each member – state to provide cheap natural gas resources for its own needs. For the decision – makers would be hard to explain their compatriots why they have to undertake some unprofitable or unfavorable measures in order to help some other member – state. The second point I would like to make is the possibility of a disagreement between member – states about the attitude towards Russia as one of the principal exporters of natural gas to the EU. One illustration of this is the modest opinion of Loyola de Palacio\(^{43}\), who, on the one hand, mentioned the necessity of the diversification of supply resources and their routes, and for another hand, she did not see as a big problem the dependency from external resources. As the main argument L. de Palacio stated the mutual

\(^{41}\) The EU’s dependency from the Russian natural gas is usually determined by import volumes of gas. Moreover, the fact that Gazprom exports gas to Central and Western Europe mainly under long - term (up to 25 years) can be also considered as the additional possibility to subordinate the European states to the Russian gas geopolitics. (information about long – term contract system available at: “Europe”, Gazprom, 18 Apr., 2010 <http://www.gazprom.com/marketing/europe>.


\(^{43}\) A Spanish politician, who was Foreign Minister of Spain and a member of the European Commission as a commissioner for energy and transport.
interdependence between suppliers and consumers of natural gas. “Not only is Europe dependent on gas supplies from non-EU producers, but the producing countries depend also very much on the revenues gained through gas exports”\(^{44}\). In contrast, there is a negative opinion of Sandra Kalniete\(^{45}\), who is not expected Russia to be a reliable partner, which is not going to negotiate with the EU on equal terms. Although S. Kalniete in her article\(^{46}\) supposed the RF to be the ambivalent country - “Russia is not an enemy at the gates, but neither is it a friend of the united Europe”, I would say that she looked at the foreign policy of the RF as on the real threat for the EU. True, Russia uses and is planning to employ in the future its energy resources as the means in foreign policy implementing, but it does not mean that the RF is going to act in this point at any price and what it would lead to the “geopolitical fragility of the region [of Eastern Europe]”. Describing the problems of the EU’s energy security, S. Kalniete has not mentioned only Russia as a cause of the Eastern Europe countries uncertainty and the exclusion. According to her, a number of politicians from Eastern Europe were stung by the bilateral relations and agreements concerning new pipelines construction between the RF and the EU’s largest countries - and this situation was quite emotionally defined by Radosław Sikorski (the Polish Foreign Minister) as “a new version of the 1939 Molotov – Ribbentrop Pact which divided Europe into the spheres of influence of two major powers”. Consequently it can be said, that until the different “camps” of the EU’ countries with the differing views about the possible extent of energy dependency would not come to the common solution (coordinated energy policy), Russia would be relatively free in implementing its foreign policy with the help of energy means.


\(^{45}\) A Latvian politician, who was Foreign Minister of Latvia, a Special Adviser to EU Commissioner for Energy; she is a current member of the European Parliament.

\(^{46}\) Sandra Kalniete, “Russia at the Gates: the Ambivalent Neighbour”, *SpringerLink*, 14 Nov. 2009, 05 Apr. 2010 <http://www.springerlink.com.ezproxy.is.cuni.cz/content/f6g4k00213154563/fulltext.pdf>. From this moment and hereafter to the end of paragraph, I am quoting the article mentioned in this reference.
Chapter 2. Natural Gas Markets

2.3. Russian Natural Gas Market.

By the end 2008, Russia held the largest proved natural gas reserves, was the leader in natural gas producing, had the second place in consuming, and the first place in exporting – due to all these facts the RF can be classified as a major member of the world natural gas market. Additionally, according to the data available, Russia also owns two thirds of the largest natural gas fields (the majority of them are located in Western Siberia). It is also have been reported, that in period between 2005 – 2008 seven new hydrocarbon fields were discovered, 28 deposits were found in the fields discovered earlier. Besides this, considerable natural gas fields are believed to exist in Eastern Siberia and under the Barents Sea.

Owing to its advantages, such as already explored reserves (Figure 9), sufficient export volumes of natural gas (Figure 10), its geographical and geopolitical position, Russia has the unique opportunity to export natural gas in different directions to the CIS, the EU, and other countries (Figure 11). Since the 2.2 section of the current chapter already contains the information concerning the main importers of the Russian natural gas in the EU, here I would like to mention other important consumers. It can be seen from the statistics available, that Turkey, Ukraine and Belarus received the biggest volumes of Russian natural gas in 2008 (24,00, 56,00 and 21,00 bcm respectively). Besides this, according to The Energy Strategy of Russia until 2020 (hereafter, the Energy Strategy), Russia in planning to consolidate its future

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49 “Reserves”, *Gazprom in Questions and Answers*, 10 Apr. 2010 <http://eng.gazpromquestions.ru/?id=8#c301>.


Chapter 2. Natural Gas Markets

presence on the internal energy markets of other countries. Another statement of the Energy Strategy that “export of energy resources is remaining the key factor […] for the economic and political position development of Russia in the world” is just another confirmation of the deep interconnections between energy policy aims and foreign and national security policies. These goals are supposed to be reached by the diversification of natural gas routes, increased natural gas extraction and exporting. First of all, according to the forecasts, the extraction of natural gas will be increased on 7,0 – 12,0 per cents in 2010 and on 14,0 – 23,0 per cents in 2020 (in comparison with the level of 2002). Secondly, natural gas export is supposed to increase on almost 33,0 per cents in 2020 in comparison with the level of 2002. Thirdly, trying to attain the higher level of economic and energetic security, the development of northern, eastern and southern export routes (with the following increase of their shares) is planned. Although the energetic markets of the CIS and the EU area will remain the main markets for the Russian gas in the coming 20 – 25 years, the rising demand on gas in the Pacific regions is seen as a great opportunity for diversifying natural gas supply. China, India, Japan and Korea are supposed to be the main partners of Russia in this respect. According to the Energy Strategy, the forecasting need for natural gas in these countries will increase up to 15,0 per cents in 2020 in comparison with the level of 2002.

Another point to look at while analyzing Russian natural gas market is the dependency of the country on transit – countries. On the one hand, the neighborhood with the natural gas consumers provides the significant opportunity for Russia to reach its economic and political goals with the help of gas pipelines; for another hand, this very fact makes the RF vulnerable from their relationships with transit – states (recent problems with Belarus and Ukraine are convincing facts of it). Such problems make questionable the ensuring of the Russian political interests in Europe and strengthen pipeline issues as one of the main means in the foreign policy implementations. As it is stated in the Energy Strategy, “transit problems play an important role. Due to this fact, Russia has all the necessary prerequisites for transit to provide the reliable energy supply, the effective export and the revenues from transit

the further notice (throughout extent of the current chapter) I am quoting the document mentioned in this reference.
In order to decline its dependency from the transit problems, the RF has already undertaken a number of measures, among them: subsidizing energy exports to neighboring states in order to receive control over their transit infrastructure, stopping energy supplies to states which complicate transit movements in order to attain control over energy infrastructure in these countries, and commissioning expensive alternative transit infrastructure. Russia’s investment decisions concerning the constructions of new pipelines demonstrate that new and costly transport directions are much more preferable for the RF than the servicing of already existing nets which ran through Belarus, Ukraine, and the Baltic States.

Another one point to consider while discussing natural gas market in Russia is Gazprom – the one of the most important actors in energy politics not only in Russia but also in the world. The company is specializing in geological exploration, production, transportation, storage, processing and marketing of natural gas. According to the information available at Gazprom website, the company possesses the world’s largest natural gas reserves, with 17,0 per cents of the global gas production, Gazprom Group is the leader among the world’s oil and gas companies. Besides this, Gazprom owns the world’s largest gas transmission long-distance system, which is capable to deliver natural gas to consumers inside and outside the state. Moreover, Gazprom held the leading position among European companies by market capitalization in 2008. The fact, that the state owns a controlling stake in Gazprom (50,0002 per cents) means that the company has responsibilities before state, for instance: the obligation to pay expenses on construction of new pipelines Nord Stream and South Stream. These new export pipelines are intended to fulfill the state program of natural gas routes diversification and the increase the energy (read “economic”, “political”) security of the state.

In order to conclude with the role, which Gazprom plays in the Russian foreign policy and how Russia is going to use it, a few Putin’s quotes would be enough: “Gazprom is a powerful political and economic lever of influence over the rest of the world” and “The gas pipeline system is the creation of the Soviet Union. We intend to retain state control over the gas transportation system and over Gazprom. We will not


54 Shaffer, 124.

divide Gazprom. And the European Commission should not have any illusions. In the
gas sector, they will have to deal with the [Russian] state⁵⁶.

2.4. Turkmen Natural Gas Market.

It is known, that gas production in the country is carrying out in 149 gas fields: 139 of them are located in inland area, and 10 – along the coast of the Caspian Sea. Additionally, more than 60 gas fields have been explored in the Eastern part of Turkmenistan only in recent years⁵⁷. According to the statistical review of British Petroleum⁵⁸, proved reserves of natural gas in Turkmenistan at end 2008 accounted for 7,94 tcm or 4,3 per cents of the global world reserves (the fourth largest natural gas reserves in the world). There was a dramatic increase of the reserves (on 227,60 per cents) in the year 2008 in comparison with the previous year, when natural gas stocks were fixed at the level of 2,43 tcm only (see Figure 12). As media reported⁵⁹, such a sustainable increase of reserves was result of the survey of the British oil and gas advisory firm Gaffney Cline & Associates, which confirmed in 2008, that the South Yolotan - Osman field in the eastern part of Turkmenistan contained between 4 and 14 tcm of gas in place. As a result, the country received the status of one of the world's great hydrocarbon areas with the significant producing and exporting potential.

Natural gas production level in the country between 1994 and 2008 fluctuated steeply: it dropped dramatically from 32,30 bcm in 1994 to 12,00 bcm in 1998, then rocketed to 42,50 bcm in 2000, and after there was a gradual increase till the year 2008 when the production reached its peak of 66,1 bcm for the analyzing period (see

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⁵⁶ Both quotes are from: Michael Fredholm, “Gazprom in Crisis”, Defence Academy of the United Kingdom, 08 Nov. 2006, 12 Apr. 2010 <http://www.da.mod.uk/colleges/arag/document-listings/russian/06%2848%29MF.pdf/view?searchterm=Gazprom%20in%20crisis>. The fact, that the state owns a controlling stake of shares of “Gazprom” is the additional confirmation of the state’s desire to protect the state security from the loosing the control over national resources as it is stated in the Security Strategy (see chapter 1).


Besides this, Turkmen officials believe\(^60\), that the production level could be doubled with the help of South Iolotan – Osman field, which, as supposed, could produce about 70,00 bcm a year, roughly as much as the whole country produces at the moment.

The consumption showed almost steady rise for the period between 1994 and 2008 (there was only one fact of its decline in 1995 to 7,80 bcm). The maximum level of consumption was reached in 2007 and accounted for 21,30 bcm. The decline, which occurred in the year 2008 can be recognized as insignificant – it leveled off the consumption on 10,9 per cents only (see Figure 13 for more information).

What is more, existing export capacity can be classified as considerable. Although there was a difficult situation in 1997 – 1998, afterwards the export conditions have become more favorable. The production started to exceed the consumption in more visible way from 2000 (on 30,30 bcm) and this trend continued to develop: the excess accounted for 47,10 bcm in 2008 (see Figure 13).

Nowadays Turkmenistan exports its gas to Russia, Ukraine and Iran\(^61\). As some researchers believe\(^62\), Turkmenistan could have much more significant export directions, but the former President of Turkmenistan Saparmurat Niyazov refused in the late 1990s to accept the proposal of the PSG consortium, supported by Turkey and the US, to build a pipeline, which would provide gas to Turkey and the EU. As a result, being left without other options, the country started to sell gas to Gazprom but substantially below Gazprom’s gas sales to Europe.

On balance, Turkmenistan has a real capacity to change the geography of its natural gas export and to sell gas to such regions as India, Pakistan, and the EU due to it big reserves. Moreover, official Turkmenistan said its total reserves exceed 20,0 tcm - much more than data estimated by British Petroleum in its annual statistical review\(^63\). Besides this, as Russian Information Agency Novosti reported\(^64\),

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Turkmenistan also supposed, that its natural gas export would accounted for 100,00 bcm in 2010, and by the year 2020 it would be increased to 140,00 bcm. Furthermore, according to the same agency (RIA Novosti)\(^{65}\), the average price of Turkmen’s natural gas in 2009 (340,0 US $ for 1.000,00 cubic meters) was much more competitive in comparison with the Russian (up to 500,0 US $ for 1.000,00 cubic meters) or the Norwegian (700,0 US $ for 1.000,0 cubic meters) ones. In my point of view, what Turkmenistan is really needs in this situation (in order to compete successfully with the RF on the international natural gas market) is an official confirmation of independent researches concerning their gas stocks (what is required in order to convince these regions in the reality of such projects) and to negotiate effectively with countries, interested in the diversification of natural gas import. However, the Turkmenistan officials have already declared their preference to sell natural gas to Russia (according to a long – term gas purchase contract), saying that “there will always be enough Turkmen gas for Russia”\(^{66}\).

2.5. Azerbaijani Natural Gas Market.

In comparison with Turkmenistan, Azerbaijani natural gas reserves are not so big (1,2 tcm and 0,6 per cents from total reserves by the end of 2008\(^{67}\) and due to this indicator, the country was put on the 24\(^{th}\) place in the list of natural gas reserves “owners”\(^{68}\). There was a visible increase of reserves in 1999 up to 1,24 tcm from 0,81 tcm in 1998, afterwards the changing for the period from 1997 to 2008 was not very important (see Figure 14). The reason of the reserves’ rise was the discovery of the Shak Deniz field in 1999. It is known, that natural gas deposits from this field are supposed to be used for the Nabucco pipeline fulfillment. In addition to the existed

gas stocks, the forecasted natural gas reserves are supposed to reach level of 5.00 – 6.00 tcm\(^69\).

Production of natural gas in the country slightly fluctuated from 4.50 bcm to 6.10 bcm in interval between 1994 and 2006, and from 2007 the level of production started to increase sharply (in 2007 it accounted for 9.80 bcm, in 2008 – 14.70 bcm) (see Figure 15).

The level of domestic consumption started to decrease from the year 1996 (11.40 bcm) till the year 2005 (5.20 bcm), but afterwards this trend reversed and thanks to the exploitation of Shak Deniz the consumption stood at 7.50 – 7.70 bcm in 2006 - 2008 (see Figure 15).

Since the consumption of natural gas exceeded its domestic production, Azerbaijan had to import gas between 1994 and 2006 (See Figure 15 for more information). According to the States Statistical Committee of Azerbaijan Republic\(^70\), importers of that period were Turkmenistan, Kazakhstan, Uzbekistan and Russia: if natural gas from the Central Asia has been constituted the main share of imported gas till the year 2005, for the last year of gas importing (2006), share of the RF increased to almost 74.0 per cents.

The reserves of Shak Deniz field have helped to Azerbaijan to become a net exporter of natural gas. The country exported 7.00 bcm of gas in 2008 (Figure 15). Finally, Azerbaijani’s growing natural gas export capacities, cold relationship between Russia and Azerbaijan since the collapse of the Soviet Union\(^71\), and the competitive price of Azerbaijani’s natural gas in comparison with the Russian one\(^72\) have become the reasons of the country’s including as the supplier in Nabucco project. Nonetheless, from January 2010 Russia started to import natural gas from Azerbaijan. As reported\(^73\), the contract has not specified the maximum volumes of natural gas, which have to be imported to Russia. In other words, Russia is going to


\(^{71}\) Mostly because of the Russian support of Armenian side in the Nagorno – Karabakh problem.


buy as much gas as Azerbaijan is able to supply. What is more, natural gas deliveries had doubled and accounted for 3,00 million cubic meters per day from the 5\textsuperscript{th} of March 2010\textsuperscript{74}. So, this contract has created the additional difficulties for the Nabucco project realization and for the EU’s desire to diversify routes of natural gas import.

In conclusion, I would like once again to point out on the considerable interconnection and influence between energy politics and foreign policy: as another illustration of this the new gas Azerbaijani – Russian economic partnership can be mentioned. As analytics of the Journal of Turkish Weekly concluded\textsuperscript{75}, that the signing of the Protocol [on the establishing of diplomatic relations] between Azerbaijan and Turkey\textsuperscript{76} on the 10\textsuperscript{th} of October 2010 was perceived by Azerbaijan that “Turkey was ignoring its brother’s interests”. The attentive eye will notice, that few days later (on the 14\textsuperscript{th} of October 2010) the long – term contract on natural gas purchase and sale was signed between the RF and Azerbaijan. There is no doubt, that this event would create the additional problems for Nabucco project realization and provide other advantages for Russia in its foreign policy implementations.

To sum up, the Russian leadership in the world energy market is explained not only because the sufficient natural gas reserves, but also due to its skilful gas geopolitics. It is absolutely clear that the long – term contract system helps Russia to gain an influence over consumers and suppliers of natural gas from other countries. The fact that Gazprom is having exclusive right on natural gas production, transportation etc and that this situation is actively supported by the state – all this provide to the RF additional advantages on gas market. The analysis of another one Russian gas tactics - “pipelines strategy” I will present in the next chapter.


\textsuperscript{76} Turkey was the main supporter of Azerbaijan in last years (including the Nagorno – Karabakh issue).
3.1. The Struggle for Power: from Nuclear to “Pipeline” Balance of Power.

Since the dissolution of the Soviet Union and the collapse of the Cold War system, the nuclear balance of power has lost its actuality. The strategic arms limitation talks between the US and the RF was resulted in the signing of the Strategic Arms Reduction Treaty (hereafter, the START) on the 8th of April 2010 in Prague by Dmitry Medvedev and Barack Obama. According to the START, each part of it shall reduce and limit its strategic offensive arms. Few days later, Dmitry Medvedev in the interview to the American ABC News TV – channel has expressed his position concerning the revival of the Cold War: “The Cold War was a boring thing. Nobody gets better for it. Tremendous money is wasted. Our lives get more difficult. We look at each other as enemies. What is good in that? In any case, I will do anything in my power in order to stop another Cold War, with the US or any other country in the world.” These events, beyond all manner of doubt, have very positive and optimistic meaning: the leaders of the great powers have done and planning to do in the future all the possible for the arms race ending. But does it really mean that after the destruction of the Cold War echo the struggle for the influence in the world would stop? Does it signify that the RF could freely implement its foreign policy and no state would desire to create obstacles to it? Not definitely. In my point of view, the post – Cold War international system also deals with the aspiration of the states for the power and influence, but the means which are employed for this purpose have become different. I would say that in conditions when the threat of nuclear war has been declined significantly, the sufficiency of natural resources for a country’s future development and security has become much more important than the military

Chapter 3. The Geopolitics of Gas Transportation in Contemporary Russia

potential increasing. Natural gas, together with the its reserve’s volumes, the size of a country’s export capacities over domestic needs and the ability to deliver this surplus to its potential consumers can be classified as the strategic resource, which helps its owner to play an influential role on the geopolitical field. It has been already discussed in the previous chapters, that the RF has an obvious possibility and a clear desire to employ this strategically important resource for the implementing of its foreign policy tasks. On the other hand, it has also been pointed out earlier on the EU’s understandable and logical aspirations for decreasing its natural gas dependency from Russia. It is absolutely clear that the US (recognizing the importance of the Eurasian continent in the geopolitics) is not going to stand aside in this struggle for power and influence. Indicating the inadmissibility of the Russian gas diplomacy for the reason that it could create a fearful and unstable geopolitical climate in Europe, the US, on the one hand, are keeping up the idea of the EU’s natural gas supply diversification, for another hand, are encouraging the aspirations of Central Asian states to deliver their gas to Europe, bypassing Russia. Besides this, as some researchers think, Europe’s dependency in Russian energy imports has also negatively resulted in the “corrosive effect” on transatlantic cooperation between the EU and the US (for instance, it is believed that further NATO enlargement has been stopped due to the strong energy ties of the RF with the wealthier Western European states). One of the effects of the US’s activity (in respond to all the mentioned above causes) has led to the active support of the Nabucco pipeline project which was intended to transport gas from the Central Asia and the Caspian Basin to the countries of Central Europe. The fact, that the RF at the same time is promoting other two pipeline projects to the same region can help to identify the main feature of the current power’ struggle in international politics, namely: arms race has been replaced by “pipelines race”. This “pipeline race” is not the attribute of new Cold War, but (using Medvedev’s definitions) as in case with the “classical” Cold War tremendous money will be wasted and some countries will look at each other as at enemies. And, definitely, it will not be “a boring thing”.

79 Keith C. Smith, “Russia – Europe Energy Relations, Implications for U. S. Policy”, CSIS, Center for Strategic & International Studies, 26 Feb. 2010, 16 Apr. 2010 <http://csis.org/files/publication/100228_Smith_RussiaEuropeEnergy_Web.pdf>. Additionally, in order to decrease the EU’s dependency from Russia and increase the EU’s bargaining positions, the US proposes to extend the using of LNG, shale and tight gas.
This chapter will present case studies of two projected pipelines, namely: the Nord Stream and the South Stream. Projects’ background, as well as their implications and realization will be analyzed from as the steps of the Russian gas geopolitics in the region. In other words, this chapter will investigate if Russia is still available to transfer its economic, resource, geographical potentials in political.

3.2. The Nord Stream Pipeline Project.

3.2.1. Basic Project’s Characteristics.

The Nord Stream pipeline project is intended to deliver gas from the RF to the suppliers in the EU. It is known, that the pipeline will be build under the Baltic Sea from Vyborg (a town in Leningrad district in the northwestern region of Russia) to the place near Greifswald (a town in Mecklenburg - Western Pomerania – that is the northeastern part of Germany). The route of the pipeline will go through exclusive territorial zones and territorial waters of Russia, Germany, Denmark, Sweden and Finland (see Figure 16). It is planned\textsuperscript{80}, that natural gas delivered to Germany, afterwards can be transported to the Belgium, the Netherlands, France, Denmark, the United Kingdom and, probably, to some other countries of the EU.

The resources for the projected pipeline will come from Yuzhno - Russkoye oil and gas reserve, and Shtokman fields and the supposed gas capacity of the pipeline is 55,00 tcm per annum\textsuperscript{81}.

The importance of this project for both the RF and some countries of the EU can be seen from the list of member – states and shareholders of Nord Stream AG (a joint venture company, which was organized for the project’s realization). To begin with its obvious member - the RF, where the project was labeled as a “transnational”\textsuperscript{82} one. Taking into the consideration the fact concerning the state – owned controlling


\textsuperscript{82} “Terminologicheskij Glossarij” [Technological Glossary], Prezident Rossii [President of Russia], 20 Apr. 2010 <http://www.kremlin.ru/terms/%D0%A1>.
stake, not surprisingly that Gazprom represents the RF in Nord Stream project. According to the information available\textsuperscript{83}, the Russian gas monopolist holds a 51,0 per cent stake, two German companies Wintershall Holding GmbH (which is owned by the world’s leading chemical corporation BASF SE) and E. ON AG (a power and gas company) have 20,0 per cents of shares each; the last 9,0 per cents of shares belong to a gas infrastructure company from the Netherlands N. V. Nederlandse Gasunie. Thus, the RF and Germany can be recognized as the most interested states with the mutual interconnected plans concerning the “Nord Stream” pipeline project. The Gazprom web page also added\textsuperscript{84} that Gazprom and GDF SUEZ (one of the leading energy suppliers from France) signed a Memorandum on additional supplies of Russian natural gas and on the entry of GDF SUEZ into the Nord Stream project. The Memorandum presumes that GDF SUEZ will receive a share of 9,0 per cent in the capital of Nord Stream AG.

According to plans\textsuperscript{85}, the construction of the first line of project will take two years (2010 – 2011) and gas delvers from this line will start in 2011. The second line of the pipeline is supposed to be finished in the year 2012, and later this year the full capacity of the Nord Stream will be reached.

It is reported\textsuperscript{86} that the project is about to provide a number of advantages for both producer and consumers of natural gas. In my opinion, one of the most important is the direct “connection” between natural gas reserves in Russia and gas consumers in the EU. Recalling gas disputes of recent date between Ukraine and the RF and following interruption in the gas supply to Europe, Russia has offered to the EU’s member – states to minimize economic and political risks with the help of new pipeline, which would bypass all the current transit states. Not surprisingly, that this idea was enthusiastically received and supported by Germany – the largest natural gas importer in Europe in 2008 (see Table 4). Generally speaking, the agreement between Germany and the RF concerning the pipeline can be recognized as an obviously successful step in the Russian gas geopolitics. It was a result of deeply interconnected possibilities and needs. For one thing, there are the highest needs (in the EU) for


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natural gas in Germany. For another thing, there are the RF geographical possibilities (natural gas reserves and the relative nearness between Russia and Germany) and political aspirations (to decline the dependence from transit states and to preserve normal relations with natural gas consumers) in order to satisfy these needs. Besides the mentioned above obvious and logical reasons, there were a number of suppositions that such an agreement has been achieved mostly due to the friendship of the former Russian president Vladimir Putin and the former Chancellor of Germany Gerhard Schröder. Although it is possible that special close ties of two leaders have taken place (there is no getting away from the fact that G. Schröder was the person who became the chairman of the board of Nord Stream AG), the new German Chancellor Angela Merkel is also interested in the realization of the project. Despite the fact, that A. Merkel is not a Russophile as Schröder is (Merkel is known for her critics of Russia on number of issues), being a pragmatic politic she has understood that Germany can derive advantages from the pipeline project and started to push Nord Stream support even though that some member – states of the EU are protesting against it. As International Oil & Gas Newspaper reported, Merkel in her letter to European Commission President has called on all EU member – states to provide their full backing to the planned Nord Stream gas pipeline. Regardless of the accusation by some researchers in “the most shameful diplomatic union in the modern relations” which were taken place between Schröder and Putin, I would classify this agreement as the understandable desire of two leaders to provide to their states the profitable and favorable conditions for the future development, although it is true that such “gas relationships” has become possible due to the absence of the common EU energy policy which help to ignore dissatisfaction and opposition of member – states

88 According to Edward Lucas, for example, this friendship was resulted in the active support by G. Schröder of a number of joint commercial companies, including those in energy industry. Additionally, as another confirmation of the friendly relations of two leaders, Lucas pointed out on the fact that the mentioned above German company E. ON AG was allowed to buy 6,5 per cents of Gazprom shares (and was the only foreign shareholder). See more in Edward Lucas, Nová Studená Válka aneb Jak Kreml Ohrožuje Rusko i Západ [The New Cold War: How the Kremlin Menaces Both Russia and the West] (Praha: Mladá Fronta, 2008) 209 – 210. Besides this, other media stressed that parties concerned has signed the agreement (for pipeline’ construction) specially just few days before the German parliamentary election. See more in: “Aleksey Miller: The Gas’ Price Will Rise”, Gazprom, 13 Sep. 2005, 18 Apr. 2010 <http://old.gazprom.ru/interviews/2005/09/130000_17923.shtml>.
80 Lucas, 202.
of the EU and transit – states. Similarly, this is an additional confirmation of the fact that Russia is applying its natural gas resources as a political as well as diplomatic means for “gaining” if not a friendship of Western European countries than, at least, a partnership. It is obvious, that Germany with its significance and influence in the EU was not chosen by accident – the close ties with this country is very important for the RF. The additional corroboration of this - the words of Dmitry Medvedev, who stated that “we [Russia and Germany] need to continue cooperation in energy sector, including the Nord Stream, as well as many other projects uniting Russia and Germany”\textsuperscript{91}.

Besides the stressing the high reliability of the new route for providing secure gas supply to Europe, the project’s organizers also pointed out on a number of \textit{future positive economic effects} of Nord Stream exploitation. There are\textsuperscript{92}, for instance, the possibilities for generating a great volume of new business for various suppliers, including pipe mills, pipe layers, engineering companies, environmental consulting agencies, etc. Furthermore, presenting the Nord Stream pipeline project as a normal commercial one, the organizers also mentioned\textsuperscript{93} that this offshore project will cost 15,0 per cents less than an onshore pipeline over a period of 25 years. The higher costs of onshore pipeline are seen as result of higher operating costs mainly. Among these surplus costs are: additional costs for energy, staff and maintenance of compressor stations needed for generating the pressure in order to transport natural gas through an overland pipeline\textsuperscript{94}. But, there is no doubt, that the creation of impulse for the EU’s economic development and the possibility to economize expenses on 15,0 per cents are not the main goal of the Russian foreign policy, since the supposed investment are at level of 7,4 billion euro\textsuperscript{95}. One may notice that describing the


\textsuperscript{94} “Facts and Figures”, Nord Stream AG, 18 Apr. 2010 <http://www.nord-stream.com/en/the-pipeline/facts-figures.html>. At the same time, as media reported, a representative of Nord Stream AG informed, that the overall cost of production will be increased to 8,8 billion dollars (additional 1,4 billion dollars will be paid as interests and commissions to banks) – the information is available at: “Stroitel’stvo Gazoprovoda ‘Severnyj Potok’ Podorozhalo na 1,4 Milliarda Evro” [The Nord Stream’ Overall Cost of Production Has Been Increased on 1,4 Billion Euro], Radiostantsija Echo Moskvy, 17 Mar. 2010, 19 Apr. 2010 <http://www.echo.msk.ru/news/664554-echo.html>.
advantages of the project (the direct linkage between producers in Russia and natural gas consumers in the EU as well as its future positive economic effects), the organizers pointed out on the benefit of its offshore “essence”. Broadly speaking, the absence of transit – states on the route can be recognized as one of the main reasons of the project’s existence.

3.2.2. **Russia vs Eastern and Central European States. Aims vs Fears.**

It can be seen from the data available (Figure 17), that the main transit routes of the Russian natural gas to Europe lies through Belarus and Ukraine. Outlet capacities of export pipelines at the Ukrainian border forms 143,0 bcm of natural gas per year and at the Belarusian border – 35,0 bcm per year\(^\text{96}\). The export destinations via Ukraine then directed Russian natural gas to 18 European countries and the pipelines routes through Belarus delivers gas mainly to Poland, Germany, the Netherlands and Belgium\(^\text{97}\). Taking into consideration the degree of natural gas dependency of European countries from the Russian natural gas (see Tables 5a and 5b), it becomes understandable why the recent gas interruptions on the Ukrainian or Belarusian borders are generally recognized as the threatening to European energy security. Besides this, the authorities of the RF also understand that such interruptions harm country’s reputation as a reliable supplier. In addition to the losses in political sphere, Russia has incurred significant economic losses. According to figures available at the web page of the Prime Minister of the RF\(^\text{98}\), only in the last “gas war” between Russia and Ukraine, the losses in the first week of January 2009 were about 40,0 million US $ and from the 7\(^{\text{th}}\) of January Russia loosed 120,0 million US $ per day. Taking into account the fact, that the conflict was resolved on January 19 2009 only\(^\text{99}\), the total losses of Gazprom were 1,48 billion USD. Not surprisingly, that Russia is trying to


\(^{97}\) Almost 70 per cents of natural gas than goes to Slovakia, the Czech Republic, Austria, Germany, France, Switzerland, Croatia, Slovenia and Italy; 18 per cents – to Romania, Bulgaria, Greece, Turkey and Macedonia; 11 per cents – to Hungary, Serbia and Bosnia; 4 per cents – to Poland (According to information available at: “Major Gas Pipelines of the Former Soviet Union and Capacity of Export Pipelines”, *East European Gas Analysis*, 06 Apr. 2010, 19 Apr. 2010 <http://www.eegas.com/fsu.htm>; own calculations).


reduce its dependency from transit – countries and looking for other gas routes to Europe. In order to decline the possible negative outcomes in this respect for the RF, Russia’s officials have even decided not to build (at least in the nearest future) the additional line of the Yamal – Europe gas pipeline, even though the infrastructure for this new line has already been constructed in Belarus. Expressing the official position of the RF, Dmitry Medvedev in the interview to Belarusian media mentioned about two reasons why the more expensive the Nord Stream pipeline project has been chosen. The first mentioned cause is the logical and justifiable unwillingness to be dependent from any political upheaval or national instability of transit – states. Furthermore, as the main reason Medvedev diplomatically pointed out on the necessity of “convenience for all European consumers” and “guaranteed fulfillment of our obligations”. True, that the satisfaction of the European natural gas consumers is very important for the RF’s revenues, but it is hard to imagine that Russia would undertake some project if it would not respond country’s interests. And the answer has come from this very interview: “the more opportunities for supplying Russian gas to Europe are offered, the better it will be” and if the demand for gas in Europe would increase, Russia is ready to discuss other ideas, including the additional line to the Yamal – Europe pipeline. Thus, it can be interpreted that if Russia would realize that some other projects could bring additional economic and/or political advantages, it would definitely undertake it even with transit – states as partners. In my point of view, the choice of the Nord Stream project is explained by the fact, that at this moment the RF is more interested in new Western European market conquest since Eastern European countries (Belarus, Ukraine, and the Baltic States) are already 100,0 per cents dependent from the Russian natural gas (see Table 5a and Figure 17). An illustration of Western European sense of purpose of the RF is the fact that Gazprom has already signed agreements for the delivery of some 22,00 bcm of natural gas to

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100 “Interview to Belarusian Media”, President of Russia, 23 Nov. 2009, 19 Apr. 2010 <http://eng.kremlin.ru/speeches/2009/11/23/2049_type82916_223020.shtml>. From this moment and hereafter to the end of paragraph (until the further notice), I am quoting the interview mentioned in this reference.

101 For instance, it can be supposed that if Russia would be sure about Ukrainian guarantees concerning the Russian Black Sea Fleet’s use of leased facilities in this country, the RF would make concessions in controversial issues about price and volumes of exported natural gas in respond. One may notice that discussions of mentioned above problems between these two countries have the simultaneous and interconnected nature. Besides this, the RF would become more “interested” in natural gas markets of Ukraine and Belarus and could negotiate the cheaper price on natural gas for them if, for instance, these countries would “decide” to turn over the control over their national gas infrastructure to Gazprom (read: “to the RF”).
consumers from the year 2011. Although it is not very big volumes, nevertheless (as the Russian natural gas expansion achievement) I would like to mention the agreements which have been signed with the companies from Denmark and the United Kingdom – countries which did not import natural gas from Russia (at least in the year 2006) (see Table 5a).

Logically, that transit – states do not supports the Russian initiative for other pipeline development. On the one hand, the revenues of these countries for gas infrastructure using will decrease if the RF will not use capacities of existing pipelines on the possible maximum. On the other hand, the main threat for transit – states is seen in the growing opportunity for the RF to use the “gas top” as the means for political and economic influence.

Even though the Nord Stream pipeline project was recognized as a part of the Trans – European Energy Networks and one of the priority energy projects of European interest, there is also a group of the EU’s member - states (for instance, the Baltic states and Poland) who due special historical relations with Russia in the past are suspicious about the new steps in the gas geopolitics of the RF. Broadly speaking, politicians and researchers in these countries do not agree with the statement that the Nord Stream pipeline is about to provide as much Russian natural gas to Europe as possible, but rather to increase the Russian (and German) influences in the region. A professor from Lithuania considers that the new pipeline is undesirable for the number of reasons. Firstly, it brings fears about increasing pressure of Gazprom through the price of natural gas. Then, Nord Stream deflates hope about the possibility to become a gas transit country (and, consequently, to receive additional budget revenues). What is more, this project has lead to the clash between the Western and Eastern European states. In addition to these reasons, the Estonian Parliament “expressed serious concern over the possible environmental fallout from the Nord

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Stream gas project and said it should not be allowed to go ahead". What is more, one Latvian spokesperson disagreeing with the pipeline construction, mentioned that constructing a pipeline which could go through the Baltic states to Germany would have cost 2,2 billion euros whereas the idea to build the pipeline under the Baltic Sea will be almost 3,4 times as expensive. The position of the Polish Foreign Minister Radosław Sikorski who has said that the Nord Stream project echoed the 1939 Molotov - Ribbentrop Pact I have already mentioned in the chapter 2 of the thesis. Notwithstanding all these facts, it is clear that neither Poland nor the Baltic states do not have any visible opportunities to create obstacles to the new pipeline for the reason that older and more prosperous member – states are more influential in upholding their national interests (including keeping their economies supplied with natural gas). It is obvious that the RF’s authorities understand that as well and tries to win the key states over to its side. How successful Russia was in its strivings can be acknowledged from the fact that all the states through which exclusive economic zones and territorial waters the pipeline will go through (Finland, Sweden and Denmark) has approved the construction of the pipeline. And, finally, the construction of the Nord Stream began on April 4, 2010.

3.2.3. The Possible Development of Events.

There is no doubt, that not only politicians but also a number of researchers are analyzing the possible outcomes from the pipeline construction. Most of them believe that the diversification of the Russian pipeline network was not intended for the increasing of European energy security but for pressing on countries of Eastern and Central Europe. Edward Lucas, for example, considers that since the existing pipelines to Germany go through Belarus and Poland on the north and through Ukraine, Slovakia and the Czech Republic on the south, Russia does not want to be

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107 Ariel Cohen, “The North European Gas Pipeline Threatens Europe Energy Security”, The Heritage Foundation, 26 Oct. 2006, 19 Apr. 2010 <http://www.heritage.org/Research/Reports/2006/10/The-North-European-Gas-Pipeline-Threatens-Europes-Energy-Security#_ftn35>. The figure will be even more considerable (4 times higher) if we will take into account the mentioned above increase of the overall cost of production (up to 8,8 billion euro).
dependent from these countries in its relations with Germany. In other words, if the RF would decide to “punish” any of these countries, this decision would influence and more important for Russia western consumers. Similarly, Lucas supposes that the Nord Stream pipeline construction would provide the additional convenience to apply the favorite Kremlin’s policy “to divide - and - conquer”.

In addition to this, analytics of East European Gas Analysis\textsuperscript{110} center provide their suppositions about the future Russian plans in respect of pipeline’ using in the year 2020 with mathematical computation. Thus, according to calculations (see Table 6), the existing pipelines together with Nord Stream will make possible to cut off gas deliveries to Poland and Belarus (which are predicted to be at level of 128,00 bcm per day in January 2020) without any disturbances in gas supply for other European countries. Besides this, as researchers of East European Gas Analysis believe, Russia could also have in mind to punish Germany by blocking the Nord Stream route. Interestingly, that Ukraine is supposed to stay one of the most important transit routes for Russia even if all the projected pipelines would be put into operation. First of all, in a case of conflicts with Belarus and Poland, Russia would need to increase export to Central European countries with the help of Ukrainian gas infrastructure (from 300,0 to 428,0 bcm per day in January 2020). Secondly, in order to provide uninterrupted supply to Europe, Russia also would need to ensure the sufficient amounts of natural gas in underground gas storage facilities in Ukraine (about 158,0 bcm a day in January 2010). Similarly, the gas future of Ukraine can be classified as more or less favorable in comparison with Belarus and Poland.

While I agree that the ramified natural gas pipeline network provides a unique opportunity to press on Central and Eastern European countries, nevertheless I think that the statement that Russia is going to employ it on every occasion and towards all the dependent countries is wrong. As the first confirmation of my opinion I would like to point out on the obvious fact, namely: the authorities of Russia clearly understand that manipulations with gas taps will be reflected in the budget revenues declining since the RF exports the significant amounts of natural gas to Europe and receives the considerable amounts of takings\textsuperscript{111}.


\textsuperscript{111} I have already mentioned earlier in the chapter 3.2.2., that the likely total Gazprom losses in the last “gas war” with Ukraine on January 2009 were about 1,48 billion USD. The returns on gas sales (net of
Moreover, the regular using of “gas tap” will not be favorable to the future economic and political relations between Russia and European countries inasmuch as Russia is pretending to be a reliable partner not only in natural gas exporting but in other spheres as well.

Besides this, the EU’s desire for natural gas import diversification together with the rising interests in shale gas producing in Europe will considerably decline the opportunity for Russia to use its natural gas reserves as the geopolitical lever and will definitely decrease the Russian influence in the global energy balance. As reported\(^\text{112}\), energy giants such as ExxonMobil and Royal Dutch Shell snap up licenses in a number of countries (France, Sweden, Poland, and Germany) to explore for shale. If Gazprom before rejected to admit that the discovery of substantial shale gas reserves could influence the energy power of Russia, now the Natural Resources Minister Yuri Trutnev in the interview has said the following: “We have a problem with shale gas. This is not only my position, but the position of Gazprom as well”\(^\text{113}\).

Additionally, I suppose that the probability of the recurrent gas disputes repeating with Ukraine (and, consequently, of interruptions of gas supply to this country and then to Europe) has been reduced with the election of Viktor Yanukovich as a President of Ukraine, who is supposed to be a pro–Russian politician (at least, at first glance). It is widely accepted\(^\text{114}\) that Russia from the very beginning has used the excise tax and custom duties) to Central and Western European countries were 1,430,5 billion RUB (48,69 billion USD) in the same year. At the first glance the share of the losses in the revenues were not very high - 3,04 per cents only, nevertheless, I think that the “gas wars” can be recognized as a very expensive tool in the gas geopolitics (especially in a long – term period) and in all probability will not be used often.

Furthermore, the rising dependence of Gazprom in the stable and reliable natural gas demand from Central and Western Europe was confirmed by the fact, that sales to this region accounted for 65,5 per cent of the total export volume in 2008 and increased on 557,1 billion RUB (18,96 billion US $) in comparison with the year 2007. (Information available at: “Europe”, Gazprom, 19 Apr. 2010 <http://www.gazprom.com/marketing/europe/>).


114 “Russian Analytical Digest, N 75, 16 March 2010”, Länder – Analysen, 16 Mar. 2010, 20 Apr. 2010 <http://kms2.isn.ethz.ch/serviceengine/Files/RESSpecNet/114018/ipublicationdocument_singledocument/b7b6d183-c891-4b0f-9be5-a7f4650b1b79/en/Russian_Ana lytical_Digest_75.pdf>. In my point of view, one of the best explanation of the Russian foreign policy towards Ukraine at the time of V. Yushchenko presidency were the words of Sergei Lavrov, the Minister of Foreign Affairs of the RF who said in 2005 that “Ukraine would have to take into account the price of distancing itself from
Gazprom monopoly to exert political pressure on Ukraine because of the rejection by the Russian officials of the Ukrainian foreign policy’ aspirations under the guidance of the former President Viktor Yushchenko (for example, the issues about the possible Ukrainian membership in NATO and other aspects of West - oriented “orange revolution’s directions).

Furthermore, in all likelihood the tense relations between Russia and other its frequent opponent Poland could become better in the nearest future. As the reasons for this possible improvement three recent events can be mentioned. Firstly, it is the participation of the Russian Prime Minister Vladimir Putin in the ceremony which was held in memory of the Katyn massacre in April 2010 (it is known that the issue of not - acknowledged responsibility for the massacre by the Russian’ officials has been one of the obstacles for the relation’s improvement between the states). Secondly, the relations between two states could be improved due to the fact that they are expected to finalize an agreement on April 2010 for extending its current gas supply contract until 2037 and increase its maximum import volumes via the Yamal pipeline almost on 4.6 times. However, some analytics believe, that the mentioned above two events were just a result of another steps of the Russian gas geopolitics, namely: the desire to fix the relations with Poland because of growing awareness of Poland's potential shale gas reserves for the Russian energy dominance in the region. There was also another event, which is hardly connected with the probably means of the Russian gas geopolitics – the plane crash on April 4th, 2010, killing 96 people abroad including the President of Poland Lech Kaczyński. I think that a sympathetic response by the RF’s officials and common citizens of Russia to the Polish air force crash near by Smolensk could significantly improve the relations between two states. A confirmation of this is a quote from a Polish newspaper: “Russia's behavior after the tragedy in Smolensk totally contradicts the thesis of those who claim that closer relations between Russia and Poland are impossible”.

Russia” (the quotation was taken from: Bertil Nygren, The Rebuilding of Greater Russia: Putin’s Foreign Policy Towards the CIS Countries (London: Routledge, 2007) 53).  
Lastly, I would not agree with the mentioned above conclusion of East European Gas Analysis centre, which stated that Russia could easily manipulate Germany by blocking the Nord Stream route without any disturbances to other European states. Personally, I think that Russia would not risk worsening the relations with such a considerable and influential country not only in the EU but in the world. After, the RF in all probability would not desire to interrupt the newly founded gas importers, namely: Denmark and the United Kingdom (where, as supposed, natural gas will be transported from Germany).

Analyzing the current situation connected with the Nord Stream advancement and construction, it can be said that the Nord Stream pipeline is significant success in the Russian geopolitical aspirations.

3.3. The South Stream Pipeline Project.

3.3.1. Basic Project’s Characteristics.

The South Stream pipeline is another one project promoted by the RF and which was intended to deliver natural gas to the suppliers in Europe (to countries in its Central and Southern part). The onshore part of the pipeline will start at the Beregovaya compressor station which is located in the Southern federal district of Russia; at the Black Sea coast (this part of the pipeline has been already finalized\(^\text{118}\)). Then it will run under the sea and finish near the port of Varna at the Bulgarian coast. It is planned that two possible routes will go afterwards from Bulgaria to north and south (see Figures 18 and 19). In order to implement onshore section of the pipeline outside the RF, five intergovernmental agreements have been already signed between Russia and natural gas importers in Europe, namely: Bulgaria, Serbia, Hungary, Greece, Slovenia and Austria\(^\text{119}\). According to these agreements, joint ventures will be established in order to carry out feasibility studies, and later construct and operate onshore section of pipeline in each participating country. Not surprisingly, that these


agreements stipulate that Gazprom will hold no less than 50.0 per cents of shares in every joint venture. Besides this, the agreement with Romania is under negotiations. The beginning of cooperation with Romania can be classified as another one undoubted strategic success of Russia in its gas geopolitics. It is known, that Romania has been a strong supporter of the Nabucco pipeline project and categorically opposed the South Stream project, but the situation has changed since the year 2010. It was reported\(^\text{120}\), that on February this year Romania has confirmed its interest in the South Stream pipeline project and has passed to Gazprom all the documents with essential data which were necessary to draft a feasibility study of the gas pipeline's route through Romania. Afterwards, in late April 2010 the Minister of Economy of Romania Adriean Videanu announced\(^\text{121}\) that South Stream pipeline would pass via Romania. Additionally to the routes mentioned above, it is also supposed that offshore gas pipelines could lay under the Adriatic Sea as well in order to supply Southern Italy region\(^\text{122}\).

It has been claimed\(^\text{123}\) that the raw base for the projected pipeline will come from the Russian natural gas infrastructure, but the source base will consists of the Russian gas as well of gas which Russia is buying in Central Asia and Kazakhstan.

According to the plan, the pipeline’s capacity will reach the level of 63,00 bcm per annum, the total length of the offshore’ part will last for 900,0 kilometers; and the construction is planned to be finished in the year 2015 only\(^\text{124}\). Meantime, a feasibility study of the project’s offshore part is taking part in Greece, Bulgaria, Hungary and Serbia. The investment part is planned to start as the feasibility studies are finished\(^\text{125}\). It is expected, that the overall investments into the project will be around 10,0 billion US $\(^\text{126}\).

The project was initiated by the RF and Italy. The latter country is known as one of the world’s largest natural gas consumers (see Table 2), the second largest gas importer in the EU (see Table 4) with almost one third of natural gas imported from Russia (see Table 5). Besides this, Italy is another one country in Western Europe which enjoys special relations with Russia. It is known about a friendship between the Russian Prime Minister Vladimir Putin and Silvio Berlusconi – the Prime Minister of Italy, another one influential country of the EU (together with Germany and France). Thanks to this friendship the Russian – Italian economic ties began develop rapidly. It was reported\textsuperscript{127}, that Italy started buying more gas from the RF during Berlusconi’s stay at power. The Russian part of the project is logically represented by Gazprom, the Italian part – by Eni S.p.A. A firm (an integrated multinational energy company, which also was a partner of Russia in the Blue Stream pipeline construction). Each partner has 50,0 per cents of the shares in a joint venture South Stream AG, which was organized for the project’s realization. Furthermore, the participation of other firms is agreed, but their share will be distributed on the onshore parts of the pipeline\textsuperscript{128}. It is already known\textsuperscript{129} that Gazprom and Eni S.p.A has agreed that the French energy company EdF would become another one shareholder of the joint venture and would receive 20,0 per cents of shares. It is expected, that the negotiations between all the interested parts will be finalized in the signing of a trilateral treaty at the Saint Petersburg International Economic Forum, which will take part on June, 17 – 19, 2010.

Explaining the necessity of the pipeline’s construction, the pipeline’s web page presents\textsuperscript{130} number of (I would say, traditionally positive) opinions of politics and government officials from the RF and European countries. There is, for instance, the desire of all the participating states to satisfy Europe’s rising demand of gas, to diversify gas flows and to increase energy security in Europe. Besides this, there is also a remark about the significant opportunity for involved states to stimulate their


economies development by creating jobs and revenues from gas transit fees\textsuperscript{131}. Definitely, the economic interests are very important, but it is much more interesting to investigate which geopolitical tasks Russia is having, promoting the construction of the South Stream pipeline.

\textbf{3.3.2. The South Stream Pipeline Project as the Additional Step to Become the Lord of the Rings. The Gas Rings.}

Clearly, that in the current world the economic interests are dependent from the geopolitical ambitions. This was already seen on the example of the Nord Stream pipeline project: the construction of the new offshore pipeline is much more expensive than using the already existed additional line of Yamal – Europe pipeline or building the new onshore one through the Baltic States. The pretty much the same is the situation around the South Stream pipeline. There is a possibility to “add” supplementary onshore lines to the existed Blue Stream pipeline, which is transiting the Russian natural gas directly to Turkey (see Figure 17). The Blue Stream starts from the Beregovaya compressor station (the same point of departure is planned for the South Stream pipeline) and goes across the Black Sea. Moreover, according to the Gazprom website\textsuperscript{132}, this gas transmission corridor is ready for using for other projects’ implementing, but as a likely destination the countries of the Middle East and Israel are considered. Probably, these new routes also will not come into the reality because of the Russian unwillingness to be dependent from Turkey, which could become a transit – country in this case. Although the current Russian – Turkish cooperation (especially in the energy sector and trade) is developing dynamically\textsuperscript{133}, it is still possible that existing relations could getting worse if the issues concerning the competition for influence between two states in Central Asia and/or Caucasus would become actual. In my point of view, the construction of new South Stream pipeline shows a clear desire of Russia to compete with another one pipeline in the region –

\textsuperscript{131} All these aims are already well known from the Nord Stream pipeline project analysis (see 3.2.1. section of the thesis) and I am not concentrating on them one more time in the current part of the thesis.
\textsuperscript{132} The Blue Stream pipeline which consists of onshore and offshore parts is transiting the Russian natural gas directly to Turkey. Starting at Beregovaya compressor station, this offshore section then goes across the Black Sea – according to the information available at: “Blue Stream”, Gazprom, 26 Apr. 2010 <http://www.gazprom.com/production/projects/pipelines/bs/>.
Nabucco, although Vladimir Zubkov (First Deputy Prime Minister of Russia and Board of Directors Chairman in Gazprom) has stated that “Russia stands for diversification of gas flows to Europe and doesn’t regard Nabucco as a competitor to the South Stream and the Nord Stream”\textsuperscript{134}. But it does not seem like that. It is known\textsuperscript{135}, that the Nabucco pipeline project has to connect almost the same regions as the South Stream project, namely: \emph{the Caspian region, Middle East and Egypt via Turkey, Bulgaria, Romania, Hungary with Austria and go further on with the Central and Western European gas markets} (see Figure 19). It is obvious that two pipelines in the same regions would be competitive. And the question is not only in the struggle of two joint ventures for resources, consumers on the same markets, and for the possible prices and profits. It is much more about the geopolitical influence in the regions in which Russia is very interested. It is not a secret that after the dissolution of the Soviet Union and the Warsaw Pact’s failure Russia has lost its political influence and leadership in the region and since then is attempting to recover its position in the FSU countries, as well as in the former satellites in the Communist camp. For Russia it is principally to be the first in the pipeline construction, because it provides a great opportunity to “lock” producers of natural gas in the Central Asia and consumers in Europe by the long – term contracts, and to the certain extent to influence these countries’ politics. In my view, the very existence and the further operation of the pipeline in this region is seen by Russia as the means for strengthening its positions and influencing the balance of powers in addition to the Nord Stream pipeline project. Literally speaking, it gives a chance for the RF to put Europe inside its natural gas ring.

In order to fulfill this task, Russia has already undertaken a number of steps. To begin with the attempts for ensuring stable resource base for the new pipeline. The idea to fill the pipeline with the natural gas from the Central Asian region will help Russia to gain additional economic and (geo)political advantages. Firstly, it will help Russia to increase the share of natural gas from the Russian gas infrastructure at the global energy market. At the same time, the RF will have a chance to decline the possibility for Europe to buy natural gas directly at the countries of Central Asia and Kazakhstan (natural gas from this region is supposed to fill the competing Nabucco

\textsuperscript{135} “Project Description/Pipeline Route”, \textit{Nabucco Gas Pipeline Project}, 26 Apr. 2010 <http://www.nabucco-pipeline.com/project/project-description-pipeline-route/project-description.html>.
pipeline): according to the information available, the gas purchases of Russia in Central Asian region raised on 3,7 times for the period from 2005 to 2008 (similarly, it could become possible that there will not be enough gas in the nearest future in order to fill the Nabucco pipeline). Besides this, being a landlocked countries, Kazakhstan and Central Asian countries has become more dependent from Russia as their significant natural gas importer. In addition to this, the long – term gas purchase and cooperation agreements are in place with Uzbekistan, Turkmenistan, Tajikistan, Kazakhstan and Kyrgyzstan. These agreements envisage gas’ deliveries to Russia, but also provide an opportunity for Russia to work on the geological survey of subsurface resources in Uzbekistan and Tajikistan and to obtain two subsurface use licenses of gas areas in Kyrgyzstan. The economic benefit of these steps is clear as well: the more gas Russia sells after at the global energy market the more revenues it gains. On the whole, it can be said that Russia was quite successful at the first stage of project.

Even though a number of European leaders (as Angela Merkel, Silvio Berlusconi and others) have stressed the importance and necessity of the South Stream pipeline construction, the project is still lacking the status of the project of the European interest (it is not a part of the TEN – E). The status means that a project is acknowledged as an important one for sustainability and security of energy supply in Europe and, consequently, has to be supported by the entire EU member – states. What is more important, the projects, which are supported by the EU’s member – states involved, can be nominated for the financial support’ receiving from the Community budget. As reported, the financial aid can come through the following sources, namely: the TEN - budget line, the Structural Funds and Cohesion Fund. Additionally, the European Investment Bank has also greatly contributed to the financing of these projects through loans. Logically, that without such a status South Stream can be nominally considered as a project of interest of their shareholders only (Russia, Italy, and from the summer this year - France). Not surprisingly, that the shareholders are attempting to gain as much support to the project as possible. Trying to achieve this strategic goal, the Gazprom’ and Eni’ heads have decided to repeat the

“maneuver” with Gerhard Schröder’ hiring and offered to Romano Prodi the post of the Chairman of the South Stream pipeline project, but R. Prodi has refused this suggestion. There is no doubt, that if R. Prodi (the former Prime Minister of Italy and President of the European Commission) would accept this offer, he could have done a lot for the South Stream pipeline promotion. Suffering a reverse with this appointment, Russia is trying to provide the support to the project from all other possible routes. It is known, for example, that the intergovernmental agreements between Russia and the EU’s member – states, participating in the South Stream pipeline project, are declaring that “parts [of the project] are going to undertake all the possible efforts for the receiving the status of the TEN’s project in order to use all the advantages which such projects are experiencing”\(^{140}\). Probably those efforts of the European countries will bear desirable fruits in the nearest future, because Günther Oettinger, the European Commissioner for Energy in the European Commission has noted at an energy forum in Bulgaria that “South Stream will increase the capacity for gas imports [to Europe] and set up a new infrastructure supply network” and due to this reason the “South Stream could be backed by the European Commission on condition that it meets the technical requirements for security”\(^{141}\). At the same time, these words of the European Commissioner could not have been perceived by the RF in a very positive way as an opportunity to gain advantages in comparison with its rival project. The reason for this opinion is another one statement of Günther Oettinger, which he has pronounced at the forum, namely: the EU could also lend its support to Nabucco project because of the growing energy demand in the EU\(^{142}\).

Personally, I think that the receiving of the South Stream pipeline project the status of the TEN’s project could face up with the opposition of a number of the EU’s member – states seeking to reduce the dependency from the Russian natural gas deliveries. There always will be the states which would prefer the diversification of supply from different countries to the diversification of routes of the Russian natural gas and which would be against the control of supply by the RF. The only possible way for Russia is to enlist the aid to its project from the most powerful states of the EU, which are


really interested in the increasing natural gas deliveries. At the same time, it is obvious that the lack of the status of TEN’s project does not restrain the RF from the strategic plans’ implementation (to ensure its national interest with the help of energy resources). The decisiveness and assertiveness of the Russian officials to put this idea into practice can be confirmed with the recent words of V. Putin who mentioned: “We [Russia] intend to realize this project no matter what”

Although it can be said that the RF was quite successful in promoting its strategic interest and already has got the essential support from Germany and Italy, nonetheless Russia has also faced up with the some difficulties in the mutual understanding with the Italian partner which has been resulted in the sharp objections from the Russian side. For instance, Stanislav Tsygankov, the head of the external economic activity department of Gazprom, describing at the beginning of April 2010 the perspectives of the South Stream pipeline project’ development, recognized de facto the actual state of affairs as problematic. Moreover, he mentioned that the Italian partner was blocking the development of events: owing to the lack of the proper work from the Italian part, the progress of the offshore part of the South Stream project was recognized by him as insignificant. According to S. Tsygankov, Eni (which is responsible for the offshore section construction) does not want to get an agreement on working programs or even on fulfilled researches. What is more, the Italian side has not paid for anything yet, while the Russian part has covered all the expenses. The reason for such a serious dissatisfaction from Russia was the speech of Paolo Skaroni (the Chief Executive officer of Eni S. p. A.) during which he has called for merging of the South Stream and Nabucco pipeline projects and explained it as a “strategic fit” for all interested parts, because it would help to “reduce investments, operational costs and increase overall returns”. Even though P. Skarponi has mentioned about the economic motive (the desire to economize expenses and to gain as much profit as possible), this proposal definitely was heard by the Russian partners as one with the political meaning (since the natural gas pipeline construction always has the political implication). Not surprisingly, that Russia is skeptical (if not to say exasperated) about this idea. As the first explanation of this I would like to mention the evident

desire of the RF to gain the considerable geopolitical power and weight in Europe with the help of its energy resources. Consequently, Russia will obviously avoid the situation and admit the proposal which could decrease or, what is more – destroy the Russian foreign policy aspirations. Reacting on the suggestion of P. Skarponi, Energy Minister of the RF Sergei Shmatko has noticed, that these issues were not discussed at all. Furthermore, “Russia isn’t considering merging its South Stream gas pipeline to Europe with the rival European Union - backed Nabucco link”\(^{146}\). The irritation from the unacceptable and inadmissible terms of this offer for the RF was so obvious, that during the interview S. Shmatko has called two natural gas projects as “rival”, than that they are “far from being competitors” and, at the same time, he firmly established that South Stream “is more competitive” than Nabucco. As the second explanation of the Russian refuse I would mention the fact that Nabucco is supported not only by the EU but the USA as well and was intended in order to stop the natural gas monopoly of the RF in Europe. Consequently, the Russian participation in the combined common pipeline’ construction is impossible to imagine, because Russia (using the rhetoric of the Foreign Policy Concept of the RF) will not agree with what is seen as the EU’s and mainly America’s desire to limit the Russian interests as “one of influential centers in the modern world” at reaching economic, political and geopolitical goals and will definitely try to overcome “continued political and psychological policy of “containing” Russia”. The contradiction between the sides about the South Stream pipeline project’ future could have led to the protracted conflict which further could have continued in the search of new partners or even in the material changes in the realization of the whole project if the recurrent strategic success of Russia had not occurred. This happened a month later when the Russian Prime Minister paid a working visit to Italy to discuss cooperation in science and energy (including the issues on the South Stream pipeline project). During his visit V. Putin, commenting the disagreement between the Italian and Russian sides, has confirmed\(^{147}\) that there were no delays in South Stream implementation. Moreover, the Russian – language version of the same report about Putin’s visit to Italy even called this discrepancy


about inter-company problems between Gazprom and Eni as ostensible\textsuperscript{148}, “forgetting” a very eloquent speech of S. Shmatko in the twinkling of an eye.

In comparison with persistent and stubborn efforts of Russia for the success of the South Stream pipeline project realization, the Nabucco project is experiencing much more problem. To begin with the fact that Gazprom policy to conclude long-term binding agreements and to pre-empt at market prices as much Turkmen and Azeri gas as possible has lead to the situation when the source base for the Nabucco has become questionable. Additionally, some critics have asserted\textsuperscript{149} that the project has at least another two restraining moments. Firstly, its protracted preliminary stage which has been lasting for ten years already. Secondly, it is a complicated ownership structure of Nabucco Gas Pipeline International GmbH when each of six shareholders holds an equal share of 16.67 per cents and no one seems to be an obvious leader of the project. What is more, Energy Commissioner Günther Oettinger has said\textsuperscript{150} recently that Nabucco would come into operation in 2018 at the earliest. Consequently, the South Stream pipeline project (in comparison with Nabucco) can be recognized as the project with every prospect of success.

To sum up, Gregory R. Copley\textsuperscript{151} in his analysis of the current situation has noted\textsuperscript{152} that Moscow was currently in the ascendant and pointed out on the entirely new dynamic in Eastern Mediterranean and South-East European strategic affairs. According to him, the world has discovered itself “in a period and a region in which Russia, not the West, is taking the key initiatives and has much of the advantage”. Continuing to evaluate the situation, G. R. Copley has surprisingly lamented that Russian foreign policymaking receives insufficient attention in US and other Western media, and “remains as opaque to Western analysts as it was during the Cold War era when Russia was veiled by an Iron Curtain”. I would allow myself to contradict to the


\textsuperscript{151} The American researcher and author of a number of publications on strategy, defence and foreign affairs.

last statement of the expert. In my point of view, it is hard to accuse the RF in the “disguising” of its (geo)political plans, aspirations and the “weapons” it is going to use in order to achieve its aims: the better confirmation of my word are texts of the Concept, Energy and Security Strategies of the RF, which I have already quoted in the first two chapters of the thesis. What would be more clear and distinct than words: “The global character of energy problems and their continually rising politicization, as well as the influential position of the Russian energy complex in the world energy system have pushed the energy factor to the place of basic elements of the Russian diplomacy”153?

CONCLUSIONS

The overview of the main principles of realist and neorealist theories (such as national interests, security, and power politics) and categories used in The Foreign Policy Concept of the Russian Federation, The National Strategy of the Russian Federation until 2020 and The Energy Strategy of Russia until 2020 has corroborated my idea that neo(realism) has shaped the foreign and security policies of Russia. To begin with the confirmation that the RF definitely sees itself as a great power, namely: as a country with the visible role in international affairs, the significant responsibility for global world developments and the obvious possibilities and desire to take an active part in the formulating as well as in the development of international agenda. Declared itself as a great power, the Russian officials have logically pointed out on the aspirations to protect its current position and take part in the struggle for power with the “historic West” in order to protect state’s national interests. The special attention in this respect Russia is paying to its natural resources, which are seen, on the one hand, as one of the most influential levers in the foreign policy implementation (the state is not only planning to increase the potential of the fuel and energy industries to support its reputation as a reliable partner, but also is going to promote the development of own economy and diversify country’s presence on the world markets). At the same time, understanding the conditions of uneven distribution of natural resources in the world, Russia, for another hand, determines its natural resources as the tool for security goal realizations. Among the main security tasks articulated by Russia are the necessity to maintain the control over its national resources (through the preservation of state monopoly in the gas sector, for instance) and overcome the discrimination against the RF on the regional and world energy markets. On the whole, the role of Russia in world energy supply is viewed as a means for ensuring state’s foreign policy independence and the state is going to use this lever notwithstanding of the other countries which were characterized by the Minister of the Foreign Affairs of the RF as “unhappy about a strong Russia”.

The examination of the situation on the international natural gas market has demonstrated the objective nature of the RF to rely on its natural gas possessions for its strategic aims’ achieving: the natural gas reserves of Russia at end of 2008
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constituted 23.4 per cents from total world reserves and, consequently, yielded the first position for the country. In addition to this, Russia (at the same year) was recognized as the leader in natural gas producing and exporting, and one of the largest (after the US) consumers of natural gas. All these numbers would have meant nothing if only Russia had not had the advantageous geographical and geopolitical positions and had not been surrounded by countries and regions with insignificant gas reserves and continually and dramatically rising natural gas consumption. But in the reality the country is claimed to be the main importer of the number of the FSU and the EU countries. For instance, almost a half from 27 countries of the EU in the year 2006 can be recognized as highly dependent (Austria, the Czech Republic, Poland, Hungary and Romania) and as fully dependent (Bulgaria, Estonia, Lithuania, Latvia, Finland, Greece and Slovakia) from the Russian natural gas. Not surprisingly, that the recent interruptions in the gas supply because of the gas disputes between Russia and some transit – states have clarified for the EU the necessity to diversify suppliers, transport routes and transport mechanisms (as it was stated, for example, in The 2006 Green Paper – a European Strategy for Sustainable, Competitive and Secure Energy). Nevertheless, I believe that the absence of the common European strategy (with the common opinion on the energy questions) because of the disagreement between the member – states about the attitude towards Russia as one of the principal suppliers of the EU, has make the RF relatively free in implementing its geopolitical interests with the help of energy means. In my point of view, the absolute freedom for Russia in this respect is impossible due to the fact that the US also sees the Eurasian region as the sphere of their geopolitical interests and recognizes the natural resources possessions and the ability to deliver export volumes of these resources to potential consumers as the strategic means, which help its owner to play an influential role on the geopolitical field. For these reasons, the US are supporting idea of the EU’s natural gas supply diversification and encouraging the aspirations of Central Asian states to deliver gas to Europe, bypassing Russia (the mentioned above activities were resulted in the support of the rival Nabucco project). Logically, that in responds to this the RF has attempted a number of steps in order to protect its interests in this sphere. As the obviously successful move of the Russian geopolitics I would like to mention the long – term natural gas purchase contracts, signed between the RF and Turkmenistan and Azerbaijan (which are supposed to be suppliers of the Nabucco pipeline). These contracts, for one thing, offer the market price for Turkmen and Azerbaijani gas, and
Conclusions

for another thing, have not specified the maximum volume of natural gas, which have to be imported to Russia (from Azerbaijan). There is no doubt, that these measures will help Russia not only to increase the share of natural gas from the Russian gas infrastructure at the global energy market, but also to create some kind of long-term problems to the Nabucco project with the source base. Additionally, declaring the similar unwillingness to be dependent from the transit – states in its relationships with natural gas consumers, Russia on the EU’s demand for diversification of natural gas routes, has presented two new pipeline projects, namely: the Nord Stream and the South Stream. Broadly speaking, the already established interaction between energy resources and international politics supplemented by the fact, that three rival pipelines are supposed to be constructed to the same (European) region make it possible to classify the modern power’ struggle as the era of pipeline race.

The research of the Nord Stream and South Stream pipeline projects has shown that Russia was pursuing a number of goals. Firstly, there is a desire to decline its dependence from transit - states (to create the direct connection between natural gas reserves in Russia and gas consumers in the EU). This goal will help to both parts in minimizing the sufficient political and economic risks and in receiving future positive economic effects (as, for instance, the opportunity to generate new businesses in this field). These aims can be classified as “declared” and official ones. Although they are definitely seen by Russia as important, but there are a number of others, which are not articulated openly. To begin with the desire of the RF to establish better relationships with Germany, Italy (and France) which are widely recognized as the wealthiest and most influential countries of the EU. Understanding the fact, that these countries are interested in the increasing of natural gas delivers and that through the system of bilateral mutually advantageous agreements these countries can gain considerable benefits in the region (even though some other countries are against of it), Russia has successfully negotiated the participation of the leading energy, chemical companies from Germany, Italy and France in the pipeline projects. Moreover, the enlisted support for its projects from such influential politicians as Silvio Berlusconi, Angela Merkel and Gerhard Schröder can be mentioned as the another one “victory” of the Russian gas geopolitics. In addition to this, how successful Russia was in its gas strategic aspirations can be acknowledged from the fact that all the states through which EEZ and territorial waters the Nord Stream pipeline will go through (Finland, Sweden and Denmark) have approved the construction of the pipeline. Furthermore,
in the framework of the Nord Stream pipeline project, Russia is putting its expansionist’s idea into practice: the gas purchase agreements have been signed with companies from the United Kingdom and Denmark (new directions for the Russian natural gas export routes). While analyzing the South Stream pipeline project, the beginning of cooperation with Romania I would identify as another one undoubted strategic success of Russia in its gas geopolitics. Despite the fact, that Romania has been a strong supporter of the Nabucco pipeline project and categorically opposed the South Stream project, in late April 2010 there was an announcement that South Stream pipeline would pass via Romania.

At the same time, it cannot be said that Russia is absolutely lucky in its policy’ implementing and all the countries in Europe are supporting the development of the Russian gas routes. Such countries as Belarus, Ukraine, the Baltic States and Poland are afraid, on the one hand, of the possibility to be inside the Russian gas ring, and for another hand, of the growing combined influence of Russia and western European states in the region. Both these reasons are supposed by a number of politicians and researchers to lead to the increasing political and economic dependence from the RF and its partners in the pipeline projects. There are, for example, such fears as: the rising possible pressure through the price of the natural gas, the loss of the budget revenues for gas transit, the growing clash between Western and Eastern and Central European states’ interests. At the same time, it is clear that discontented states do not have any visible opportunities to create obstacles to the plans of Russia and, for instance, Germany: Western European states are ready to do all the possible in order to secure supplies of the Russian natural gas for their states’ needs and Russia is not interested at the moment in the change of its politics towards the dependent transit – states. Nevertheless, it cannot be claimed that Russia will not desire in the nearest future to improve its gas relationships with the mistrustful transit - states. If Russia realize that there is some threat for its interests as natural gas supplier (as, for instance, discovered deposits of competitive shale gas in Poland) or there is some opportunity to gain additional advantages (as, for example, the chance of the Russian Black Sea Fleet to use facilities in Ukraine for much more longer period) it will not be mistaken to suggest, that the RF will attempt some moves toward the transit – states.

Finally, after the analysis of the current foreign and security policies of the RF, I am not agree with the statement that the state is aiming to employ the “gas top” in every single occasion. Although it is true and evident that Russia is trying to gain the
considerable geopolitical power and weight in Europe with the help of its energy resources, I still think that the RF is clearly understands that often manipulations with the gas lever will be reflected not only in the considerable decrease of the budget revenues, since the state exports the significant amounts of natural gas and receives the substantial amounts of takings. What is more, Russia realizes that the regular “use” of the “gas tap” will not be favorable to the future economic and political relations between Russia and European countries since the RF is pretending to receive the status of the reliable partner not only in natural gas exporting but also in other spheres well.
Abstract

ABSTRACT

Energy issues are of growing interest in the modern world. Ever since the Industrial Revolution and until the present century, energy and the need to secure its supply have been fundamental to any position of power in the world. At the same time, despite the rising role of energy in influencing state’s national security, regime development, domestic and international politics, it is a fact that the professional journals in political science and international relations have not paid the sufficient attention to publishing research on these topics; themes, which have been examined in this respect, have been mostly devoted to research to the impact of oil. In contrast, this thesis focuses on the analysis of the relationship between international politics and natural gas originated from the Russian Federation as the country, which is widely recognized to be as one of the most influential actors on the energy source markets. This research project is based on a wide review of relevant literature supplemented by the data analyzing method, method of comparative analysis and the case study method. The latter is founded upon the examination of the new projects promoted by Russia, namely: the Nord Stream and South Stream pipeline projects. The findings underline that realist and neorealist categories have shaped foreign and security policies of the Russian Federation and that energy sources are seen as one of the most influential levers in the foreign policy implementation and as a tool for security goal realizations. The main conclusions to be drawn from this study that Russia despite its desire to gain the considerable geopolitical power and weight in Europe with the help of its natural gas resources cannot be blamed in aspirations to employ the “gas top” in every single occasion.

Keywords: (neo)realism, foreign and security policy, natural gas, Russia, pipelines.
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Secondary sources:


FIGURES AND TABLES

Figure 1. World Proved Natural Gas Reserves at end 2008 (in per cents).

Source: British Petroleum.

Figure 2. World Proved Natural Gas Reserves at end 2008 (in trillion cubic metres).

In total: 185.02 tcm.

Source: British Petroleum.
Table 1. Key Natural Gas Producers in 2008 (in billion cubic meters/per cents).

<table>
<thead>
<tr>
<th>Country</th>
<th>Billion cubic meters</th>
<th>Share of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Russian Federation</td>
<td>601,7</td>
<td>19,6</td>
</tr>
<tr>
<td>The United States</td>
<td>582,2</td>
<td>19,3</td>
</tr>
<tr>
<td>Canada</td>
<td>175,2</td>
<td>5,7</td>
</tr>
<tr>
<td>Iran</td>
<td>116,3</td>
<td>3,8</td>
</tr>
<tr>
<td>Norway</td>
<td>99,2</td>
<td>3,2</td>
</tr>
<tr>
<td>Algeria</td>
<td>86,5</td>
<td>2,8</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>78,1</td>
<td>2,5</td>
</tr>
<tr>
<td>Qatar</td>
<td>76,6</td>
<td>2,5</td>
</tr>
<tr>
<td>China</td>
<td>76,1</td>
<td>2,5</td>
</tr>
<tr>
<td>Indonesia</td>
<td>69,7</td>
<td>2,3</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>69,6</td>
<td>2,3</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>67,5</td>
<td>2,2</td>
</tr>
<tr>
<td><strong>Total World</strong></td>
<td>3 065,6</td>
<td>100,0</td>
</tr>
</tbody>
</table>

*Source: British Petroleum.*

Table 2. Key Natural Gas Consumers in 2008 (in billion cubic meters/per cents).

<table>
<thead>
<tr>
<th>Country</th>
<th>Billion cubic meters</th>
<th>Share of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>The United States</td>
<td>657,2</td>
<td>22,0</td>
</tr>
<tr>
<td>The Russian Federation</td>
<td>420,2</td>
<td>13,9</td>
</tr>
<tr>
<td>Iran</td>
<td>117,6</td>
<td>3,9</td>
</tr>
<tr>
<td>Canada</td>
<td>100,0</td>
<td>3,3</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>93,9</td>
<td>3,1</td>
</tr>
<tr>
<td>Japan</td>
<td>93,7</td>
<td>3,1</td>
</tr>
<tr>
<td>Germany</td>
<td>82,0</td>
<td>2,7</td>
</tr>
<tr>
<td>China</td>
<td>80,7</td>
<td>2,7</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>78,1</td>
<td>2,6</td>
</tr>
<tr>
<td>Italy</td>
<td>77,7</td>
<td>2,6</td>
</tr>
<tr>
<td>Mexico</td>
<td>67,2</td>
<td>2,2</td>
</tr>
<tr>
<td><strong>Total World</strong></td>
<td>3 018,7</td>
<td>100,0</td>
</tr>
</tbody>
</table>

*Source: British Petroleum.*
Table 3. Export movements by pipeline in 2008 (in billion cubic metres/per cents).

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Billion cubic meters</th>
<th>Share of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>103,20</td>
<td>17,57</td>
</tr>
<tr>
<td>Total North America</td>
<td>130,59</td>
<td>22,24</td>
</tr>
<tr>
<td>Bolivia</td>
<td>11,79</td>
<td>2,01</td>
</tr>
<tr>
<td>Total South and Central America</td>
<td>13,58</td>
<td>2,31</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>55,00</td>
<td>9,37</td>
</tr>
<tr>
<td>Norway</td>
<td>92,78</td>
<td>15,80</td>
</tr>
<tr>
<td>The Russian Federation</td>
<td>154,41</td>
<td>26,29</td>
</tr>
<tr>
<td>Total Europe and Eurasia</td>
<td>349,94</td>
<td>59,59</td>
</tr>
<tr>
<td>Qatar</td>
<td>17,10</td>
<td>2,91</td>
</tr>
<tr>
<td>Total Middle East</td>
<td>22,90</td>
<td>3,90</td>
</tr>
<tr>
<td>Algeria</td>
<td>37,50</td>
<td>6,39</td>
</tr>
<tr>
<td>Total Africa</td>
<td>53,43</td>
<td>9,10</td>
</tr>
<tr>
<td>Myanmar</td>
<td>8.55</td>
<td>1,46</td>
</tr>
<tr>
<td>Total Asia Pacific</td>
<td>16,82</td>
<td>2,86</td>
</tr>
<tr>
<td><strong>Total World</strong></td>
<td><strong>587,26</strong></td>
<td><strong>100,00</strong></td>
</tr>
</tbody>
</table>

*Source: British Petroleum, own calculations.*

Figure 3. Key Natural Gas Exporters in 2008 (in per cents).

*Source: British Petroleum; own calculations.*
Table 4. Import movements by pipeline in 2008 (in billion cubic metres/per cents).

<table>
<thead>
<tr>
<th>Region/Country</th>
<th>Billion cubic meters</th>
<th>Share of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>104,41</td>
<td>17,78</td>
</tr>
<tr>
<td>Total North America</td>
<td>130,59</td>
<td>22,24</td>
</tr>
<tr>
<td>Brazil</td>
<td>11,03</td>
<td>1,88</td>
</tr>
<tr>
<td>Total South and Central America</td>
<td>13,58</td>
<td>2,31</td>
</tr>
<tr>
<td>France</td>
<td>36,66</td>
<td>6,24</td>
</tr>
<tr>
<td>Germany</td>
<td>87,10</td>
<td>14,83</td>
</tr>
<tr>
<td>Italy</td>
<td>75,31</td>
<td>12,82</td>
</tr>
<tr>
<td>Turkey</td>
<td>32,30</td>
<td>5,50</td>
</tr>
<tr>
<td>The United Kingdom</td>
<td>35,42</td>
<td>6,03</td>
</tr>
<tr>
<td>Total Europe and Eurasia</td>
<td>394,46</td>
<td>67,17</td>
</tr>
<tr>
<td>The United Arab Emirates</td>
<td>15,40</td>
<td>2,62</td>
</tr>
<tr>
<td>Total Middle East</td>
<td>26,86</td>
<td>4,57</td>
</tr>
<tr>
<td>Tunisia</td>
<td>1,25</td>
<td>0,21</td>
</tr>
<tr>
<td>Total Africa</td>
<td>4,95</td>
<td>0,84</td>
</tr>
<tr>
<td>Thailand</td>
<td>8,55</td>
<td>1,46</td>
</tr>
<tr>
<td>Singapore</td>
<td>8,27</td>
<td>1,41</td>
</tr>
<tr>
<td>Total Asia Pacific</td>
<td>16,82</td>
<td>2,86</td>
</tr>
<tr>
<td>Total World</td>
<td>587,26</td>
<td>100,00</td>
</tr>
</tbody>
</table>

Source: British Petroleum; own calculations.

Figure 4. Key Natural Gas Importers in 2008 (in per cents).

Source: British Petroleum; own calculations.
Figure 5. World Proved Natural Gas Reserves in the EU, 1994 - 2008 (in tcm).

```
+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
| tcm    | 3.87   | 3.85   | 3.81   | 3.85   | 3.77   | 4.21   | 4.03   | 3.83   | 3.62   | 3.39   | 3.22   | 3.12   | 2.94   | 2.91   | 2.87   |
+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
```

*Source: British Petroleum.*

Figure 6. Natural Gas Production in the EU, 1994 - 2008 (in bcm).

```
+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
| bcm    | 205.0  | 212.1  | 235.4  | 225.3  | 223.4  | 226.6  | 232.0  | 232.9  | 227.7  | 223.6  | 227.4  | 211.9  | 201.3  | 187.5  | 190.3  |
+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+--------+
```

*Source: British Petroleum.*
Figure 7. Natural Gas Consumption in the EU, 1994 - 2008 (in bcm).

![Bar chart showing natural gas consumption in the EU from 1994 to 2008.]

<table>
<thead>
<tr>
<th>Year</th>
<th>bcm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>344.5</td>
</tr>
<tr>
<td>1995</td>
<td>371.2</td>
</tr>
<tr>
<td>1996</td>
<td>409.0</td>
</tr>
<tr>
<td>1997</td>
<td>401.4</td>
</tr>
<tr>
<td>1998</td>
<td>414.3</td>
</tr>
<tr>
<td>1999</td>
<td>428.6</td>
</tr>
<tr>
<td>2000</td>
<td>440.1</td>
</tr>
<tr>
<td>2001</td>
<td>450.8</td>
</tr>
<tr>
<td>2002</td>
<td>451.5</td>
</tr>
<tr>
<td>2003</td>
<td>471.6</td>
</tr>
<tr>
<td>2004</td>
<td>485.0</td>
</tr>
<tr>
<td>2005</td>
<td>495.5</td>
</tr>
<tr>
<td>2006</td>
<td>488.9</td>
</tr>
<tr>
<td>2007</td>
<td>480.9</td>
</tr>
<tr>
<td>2008</td>
<td>490.1</td>
</tr>
</tbody>
</table>

*Source: British Petroleum.*

Figure 8. Natural Gas Balance in the EU, 1994 - 2008 (in bcm).

![Bar chart showing natural gas balance in the EU from 1994 to 2008.]

*Source: British Petroleum.*
Table 5a. Imported Natural Gas Dependence in the EU, 2006 (in per cents)\textsuperscript{154}.

<table>
<thead>
<tr>
<th>State</th>
<th>Natural Gas Dependency</th>
<th>Dependency from the Russian Gas</th>
<th>State</th>
<th>Natural Gas Dependency</th>
<th>Dependency from the Russian Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>90,00</td>
<td>78,47</td>
<td>Latvia</td>
<td>110,00</td>
<td>100,00</td>
</tr>
<tr>
<td>Belgium</td>
<td>100,00</td>
<td>3,43</td>
<td>Lithuania</td>
<td>100,00</td>
<td>100,00</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>90,00</td>
<td>100,00</td>
<td>Luxembourg</td>
<td>No data</td>
<td>---</td>
</tr>
<tr>
<td>Cyprus</td>
<td>No imports</td>
<td>---</td>
<td>Malta</td>
<td>No imports</td>
<td>---</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>110,00</td>
<td>75,21</td>
<td>Netherlands</td>
<td>-60,00</td>
<td>16,02</td>
</tr>
<tr>
<td>Denmark</td>
<td>-100,00</td>
<td>0,00</td>
<td>Poland</td>
<td>70,00</td>
<td>66,23</td>
</tr>
<tr>
<td>Estonia</td>
<td>100,00</td>
<td>100,00</td>
<td>Portugal</td>
<td>100,00</td>
<td>0,00</td>
</tr>
<tr>
<td>Finland</td>
<td>100,00</td>
<td>100,00</td>
<td>Romania</td>
<td>30,00</td>
<td>63,20</td>
</tr>
<tr>
<td>France</td>
<td>100,00</td>
<td>26,61</td>
<td>Slovakia</td>
<td>100,00</td>
<td>100,00</td>
</tr>
<tr>
<td>Germany</td>
<td>80,00</td>
<td>40,22</td>
<td>Slovenia</td>
<td>100,00</td>
<td>50,91</td>
</tr>
<tr>
<td>Greece</td>
<td>100,00</td>
<td>100,00</td>
<td>Spain</td>
<td>100,00</td>
<td>0,00</td>
</tr>
<tr>
<td>Hungary</td>
<td>80,00</td>
<td>75,98</td>
<td>Sweden</td>
<td>100,00</td>
<td>0,00</td>
</tr>
<tr>
<td>Ireland</td>
<td>80,00</td>
<td>0,00</td>
<td>United Kingd.</td>
<td>10,00</td>
<td>0,00</td>
</tr>
<tr>
<td>Italy</td>
<td>90,00</td>
<td>31,96</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Table 5b. Degree of Natural Gas Dependency

- 0 – 20 % Independent state
- 20 – 40 % less independent state
- 40 – 60 % state with medium dependency
- 60 – 80 % highly dependent state
- 80 – 100 % fully dependent state

\textsuperscript{154} Import dependency is understood as net imports of a country divided by the sum of the gross inland consumption and bunkers of natural gas carrier. Gross inland consumption covers consumption by the natural gas branch itself, distribution and transformation losses, and final non – energy and energy consumption. A negative dependency rate indicates a net exporter of natural gas. A dependency rate in excess of 100 per cents indicates that natural gas has been stored (definitions were taken from: “Europe in Figures. Eurostat Yearbook 2009” United Nations Conference on Trade and Development, 05 Apr., 2010, <http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-CD-09-001/EN/KS-CD-09-001-EN.PDF>).
Figure 9. Russia’s Proved Natural Gas Reserves, 1994 - 2008 (in bcm).

![Graph showing Russia’s Proved Natural Gas Reserves, 1994 - 2008 (in bcm).](image)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>tcm</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>43.82</td>
<td>43.51</td>
<td>42.44</td>
<td>42.26</td>
<td>42.35</td>
<td>42.53</td>
<td>43.44</td>
<td>43.26</td>
<td>43.28</td>
<td>43.27</td>
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<td>43.30</td>
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</tbody>
</table>

*Source: British Petroleum.*

Figure 10. Russia’s Natural Gas Production, Consumption, Export Volumes, 1994 - 2008 (in bcm).

![Graph showing Russia’s Natural Gas Production, Consumption, Export Volumes, 1994 - 2008 (in bcm).](image)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>prod.</td>
<td>549.4</td>
<td>538.8</td>
<td>544.3</td>
<td>516.7</td>
<td>534.8</td>
<td>534.6</td>
<td>528.7</td>
<td>526.2</td>
<td>538.8</td>
<td>561.4</td>
<td>573.3</td>
<td>580.1</td>
<td>593.8</td>
<td>592.0</td>
<td>601.7</td>
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<tr>
<td>cons.</td>
<td>401.5</td>
<td>407.6</td>
<td>418.2</td>
<td>404.8</td>
<td>403.6</td>
<td>403.6</td>
<td>366.5</td>
<td>368.6</td>
<td>339.9</td>
<td>353.8</td>
<td>352.8</td>
<td>366.0</td>
<td>361.5</td>
<td>377.3</td>
<td>381.2</td>
</tr>
<tr>
<td>exp.vol.</td>
<td>148.0</td>
<td>131.2</td>
<td>126.1</td>
<td>111.9</td>
<td>131.2</td>
<td>131.2</td>
<td>162.2</td>
<td>157.7</td>
<td>198.9</td>
<td>207.5</td>
<td>220.5</td>
<td>214.1</td>
<td>232.3</td>
<td>214.7</td>
<td>220.5</td>
</tr>
</tbody>
</table>

*Source: British Petroleum; own calculations.*
Figure 11. Natural Gas Transmission Networks in Russia, the CIS and Europe.

Gas transmission networks in the CIS and Europe

Source: Gazprom.
Figure 12. Turkmenistan’s Proved Natural Gas Reserves, 1994 - 2008 (in bcm).

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>bcm</td>
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<td>n/a</td>
<td>2.62</td>
<td>2.51</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>2.43</td>
<td>7.94</td>
</tr>
</tbody>
</table>

Source: British Petroleum.

Figure 13. Turkmenistan’s Natural Gas Production, Consumption, Export Volumes, 1994 - 2008 (in bcm).

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>prod.</td>
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<td>29.2</td>
<td>31.9</td>
<td>15.7</td>
<td>12.0</td>
<td>20.6</td>
<td>42.5</td>
<td>46.4</td>
<td>48.4</td>
<td>53.5</td>
<td>52.8</td>
<td>57.0</td>
<td>60.4</td>
<td>65.4</td>
<td>66.1</td>
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<tr>
<td>cons.</td>
<td>9.9</td>
<td>7.8</td>
<td>9.7</td>
<td>9.8</td>
<td>10.0</td>
<td>11.0</td>
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<td>16.1</td>
<td>18.4</td>
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<td>19.0</td>
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<tr>
<td>exp.vol.</td>
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<td>9.7</td>
<td>30.3</td>
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<td>35.6</td>
<td>39.3</td>
<td>37.7</td>
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<td>42.0</td>
<td>44.2</td>
<td>47.1</td>
</tr>
</tbody>
</table>

Source: British Petroleum; own calculations.
Figure 14. Azerbaijan’s Natural Gas Proved Reserves, 1994 - 2008 (in bcm).

![Graph showing natural gas proved reserves from 1994 to 2008.]

<table>
<thead>
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</tr>
</thead>
<tbody>
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<td>TCM</td>
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<td>n/a</td>
<td>n/a</td>
<td>0.81</td>
<td>0.81</td>
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<td>1.24</td>
<td>1.24</td>
<td>1.24</td>
<td>1.22</td>
<td>1.22</td>
<td>1.16</td>
<td>1.20</td>
<td></td>
</tr>
</tbody>
</table>

*Source: British Petroleum.*

Figure 15. Azerbaijan’s Natural Gas Production, Consumption, Export Volumes, 1994 - 2008 (in bcm).

![Graph showing natural gas production, consumption, and export volumes from 1994 to 2008.]

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Prod.</td>
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<td>6.0</td>
<td>5.7</td>
<td>5.4</td>
<td>5.1</td>
<td>5.4</td>
<td>5.1</td>
<td>5.0</td>
<td>4.7</td>
<td>4.6</td>
<td>4.5</td>
<td>5.2</td>
<td>6.1</td>
<td>9.8</td>
<td>14.7</td>
</tr>
<tr>
<td>Cons.</td>
<td>15.0</td>
<td>15.3</td>
<td>14.7</td>
<td>11.4</td>
<td>8.4</td>
<td>7.9</td>
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<td>5.2</td>
<td>7.5</td>
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<td>7.7</td>
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<tr>
<td>Exp.vol.</td>
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<td>-9.0</td>
<td>-6.0</td>
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<td>-2.7</td>
<td>-0.7</td>
<td>-0.0</td>
<td>-0.4</td>
<td>-0.9</td>
<td>-0.1</td>
<td>-1.4</td>
<td>2.3</td>
<td>7.0</td>
</tr>
</tbody>
</table>

*Source: British Petroleum; own calculations.*
Figure 16. Nord Stream. The Planned Pipeline Route.

Source: Nord Stream A. G.
Figure 17. Major Pipelines from Russia.

Source: East European Gas Analysis.
Table 6. Russian Natural Gas Export to Europe: Annual and Daily January Streams – Forecast for 2020 (in bcm)\textsuperscript{155}.

<table>
<thead>
<tr>
<th>Export Routes</th>
<th>Ukraine</th>
<th>Belarus and Poland</th>
<th>Ukraine</th>
<th>Belarus and Poland</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Streams</strong></td>
<td>[1]</td>
<td>[2]</td>
<td>[1]</td>
<td>[2]</td>
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<tr>
<td>Ukraine</td>
<td>83,000,00</td>
<td>118,000,00</td>
<td>53,000,00</td>
<td>88,000,00</td>
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<tr>
<td>Belarus</td>
<td>35,000,00</td>
<td>--</td>
<td>35,000,00</td>
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</tr>
<tr>
<td>Finland</td>
<td>6,000,00</td>
<td>6,000,00</td>
<td>6,000,00</td>
<td>6,000,00</td>
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<tr>
<td>Blue Stream</td>
<td>16,000,00</td>
<td>16,000,00</td>
<td>16,000,00</td>
<td>16,000,00</td>
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<tr>
<td>Nord Stream</td>
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<td>55,000,00</td>
<td>55,000,00</td>
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<tr>
<td>South Stream</td>
<td>30,000,00</td>
<td>30,000,00</td>
<td>30,000,00</td>
<td>30,000,00</td>
</tr>
<tr>
<td><strong>∑</strong></td>
<td>225,000,00</td>
<td>225,000,00</td>
<td>195,000,00</td>
<td>195,000,00</td>
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<tr>
<td><strong>Daily Streams</strong></td>
<td>[1]</td>
<td>[2]</td>
<td>[1]</td>
<td>[2]</td>
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<tr>
<td>Ukraine</td>
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<td>428,00</td>
<td>200,00</td>
<td>328,00</td>
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<tr>
<td>Belarus</td>
<td>128,00</td>
<td>--</td>
<td>128,00</td>
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<tr>
<td>Finland</td>
<td>18,00</td>
<td>18,00</td>
<td>18,00</td>
<td>18,00</td>
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<tr>
<td>Blue Stream</td>
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<td>53,00</td>
<td>53,00</td>
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<tr>
<td>Nord Stream</td>
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<td>176,00</td>
<td>176,00</td>
<td>176,00</td>
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<tr>
<td>South Stream</td>
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<td>105,00</td>
<td>105,00</td>
<td>105,00</td>
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<tr>
<td><strong>∑</strong></td>
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<td>780,00</td>
<td>680,00</td>
<td>680,00</td>
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<td>Ukrainian Consumption*</td>
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<td>310,00</td>
<td>310,00</td>
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<td>200,00</td>
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<td>Extraction in Ukraine</td>
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<td>-59,00</td>
<td>-59,00</td>
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<td>Gas from Ukrainian UGS Facilities</td>
<td>-220,00</td>
<td>-158,00</td>
<td>-220,00</td>
<td>-58,00</td>
</tr>
<tr>
<td>Balance</td>
<td>331,00</td>
<td>521,00</td>
<td>231,00</td>
<td>521,00</td>
</tr>
<tr>
<td>Deliveries from Russia**</td>
<td>310,00</td>
<td>521,00</td>
<td>207,00</td>
<td>521,00</td>
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<tr>
<td>Illegally Gas Takings by Ukraine</td>
<td>21,00</td>
<td>--</td>
<td>24,00</td>
<td>--</td>
</tr>
</tbody>
</table>

\textit{Source: East European Gas Analysis.}

\textsuperscript{155}The variant of conflict between Russia and Ukraine with following minimisation of natural gas transit was foreseen in the \textit{column “Ukraine”}; the variant of conflict between Russia and Belarus and/or Poland with the following minimisation of natural gas transit through these countries was foreseen in the \textit{column “Belarus and Poland”}. \(1\) – variant of the maximum export to Europe and Turkey; \(2\) – realistic variant. * - the average natural gas consumption for the last 10 years; ** - including fuel gas of compressor stations for transit to Europe (in the variant of conflict between Russia and Ukraine).
Table 18. South Stream. The Planned Pipeline Offshore Route.

Source: East European Gas Analysis.
Table 19. Competing Gas Pipeline Import Routes from Caspian Region and Middle East into Southern Europe.

Source: IntelliBriefs.