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Old and Rising Players in Central Asia:

The Case of Natural Gas

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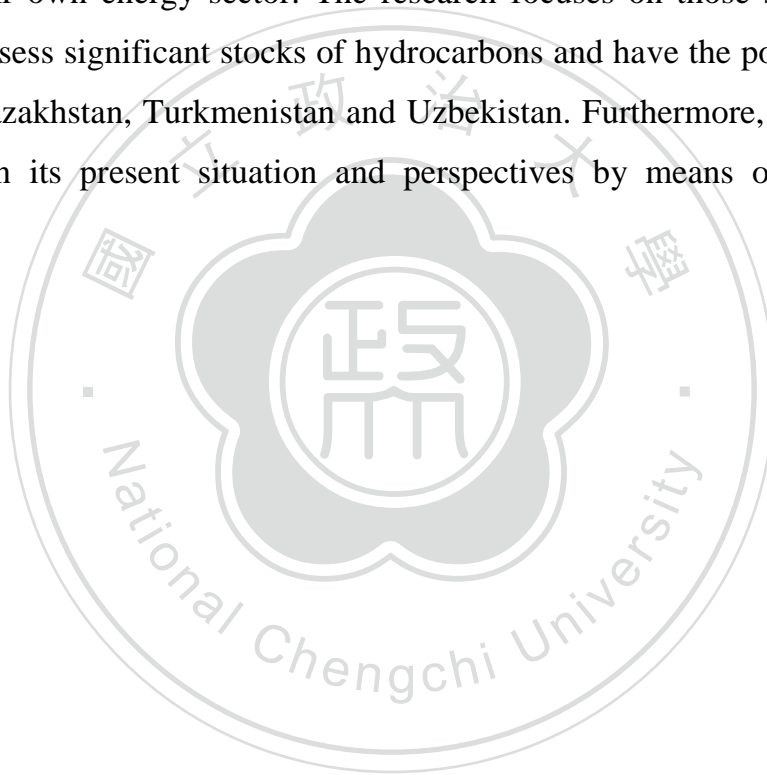
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ABSTRACT

The collapse of the Soviet Union in 1991 led to the creation of five new states in Central Asia. These states: Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan, and Kyrgyzstan, have become both the object of international rivalries in Central Asia and the sources of new political forces as they act to enlarge their independence in world politics. This paper attempts to show new and old forces in terms of natural gas in Central Asia. This thesis shows conditions and obstacles of Central Asian States (CAS) to develop their own energy sector. The research focuses on those states in Central Asia which possess significant stocks of hydrocarbons and have the potential to export oil and gas: Kazakhstan, Turkmenistan and Uzbekistan. Furthermore, this dissertation tries to explain its present situation and perspectives by means of a geopolitical approach.



Key words: Central Asia, Natural Gas, Geopolitics.

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LIST OF ABBREVIATIONS



| | |
|-------------|---|
| Bcm | billion cubic meters |
| BTC | Baku–Tbilisi–Ceyhan pipeline |
| CAC | Central Asia –Center gas pipeline system |
| CAS | Central Asia States |
| CIS | Commonwealth of Independent States |
| Cm | cubic meters |
| CPC | Caspian Pipeline Consortium |
| ECO | Economic Cooperation Organization |
| GDP | Gross Domestic Product |
| IMF | International Monetary Fund |
| KMG | KazMunaiGas |
| LNG | liquefied natural gas |
| OSCE | Organization for Security and Cooperation in Europe |
| Q | quarter of year |
| Tcm | trillion cubic meters |
| USD | United States dollar |
| USSR | Union of Soviet Socialist Republics |

Chapter 1 Introduction

1.1. Background

The collapse of the Soviet Union in 1991 paved way to the creation of five new states in Central Asia. See map 1.1. Especially three of them: Kazakhstan, Uzbekistan and Turkmenistan, have become both the object of international rivalries in Central Asia and the sources of new political forces as they act to enlarge their independence in world politics¹. This rivalry is particularly strong in the struggle among these states to increase positions of leverage over the energy economy, e.g. production, pipelines, and refining in Central Asia, because this region is blessed with enormous energy deposits.



Map 1.1 Central Asia

Sources: Afghanistan and Central Asia Research Information

¹Stephen Blank, "Energy, Economics, and Security in Central Asia: Russia and Its Rivals," 1995, <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub119.pdf> access July 2011.

Despite their distant location and underdeveloped economies, the five post-Soviet republics of Central Asia – Kazakhstan, Turkmenistan, Kyrgyzstan, Uzbekistan, and Tajikistan – have attracted the attention of the United States, Russia, China, and European states.² All five states have unexploited energy resources at a time when most kinds of fuels have become much more expensive.

These deposits are crucial to Central Asia's integration with the world economy and economic progress. Indeed, energy exports may be the only way these governments can hope for any economic stability and progress in the future. Therefore, whoever controls the energy economy will determine the destiny of these countries.

"The larger countries in and around the region, particularly in South Asia, comprise major sources of demand for energy, much of which cannot be satisfied from domestic sources."³ Thus there seems to be great potential for regional energy development and trade which can benefit all of the countries of the region. There are opportunities for natural gas trade from gas-surplus countries like Turkmenistan and Iran to gas-deficit countries ex. Pakistan and India.

"...Currently all Central Asian gas exports (outside that region) are purchased by Gazprom for forward sale to (mainly) CIS countries...."⁴ But with a pipeline connection to China, and a number of proposals to bring Central Asian gas to European markets by pipeline, competition is becoming more intense. It is in this context, Central Asian states gas has become more important in the XXI century and will become increasingly important as major hydrocarbon developments at this is region progress. Fundamental issue to trade natural gas is pipeline system. See map 1.2

² Dina R. Spechler and Martin C. Spechler, *Central Asia. Trade, energy, and security in the Central Asian arena*, Seattle, USA: National Bureau of Asia Research, 2006, p. 219.

³ William Byrd and Martin Raiser, "Economic cooperation in the wider Central Asia region," 2006, <http://siteresources.worldbank.org/INTSOUTHASIA/556101-1101747511943/21363080/WiderCAWorkingPaperfinal.pdf> access July 15 2011.

⁴ Shamil Midkhatovich Yenikeeff, "Kazakhstan's gas: export markets and export routes," 2008, access July, <http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2010.

All the newly independent Central Asian states are *super-presidential* authoritarian regimes with unclear procedures for succession to the present leadership. Any future instability would be a threat to the energy supplies and security cooperation outside powers wish to have in the Central Asian arena⁵.

Turkmenistan is important to world energy markets because of its big oil and natural gas reserves. It may be said that Turkmenistan resembles one big oil-gas field. After years of foreign investment into the country's oil and natural gas sectors, the landlocked Central Asian state has recently begun to realize its enormous production potential. Turkmenistan could become a major world energy producer and exporter over the next decade.

Under former president Saparmurat Niyazov, Turkmenistan was Central Asia's most repressive and isolationist state. Similar situation is happening under present president of Turkmenistan Gurbanguly Berdimuhamedov. There has been no sign of political liberalization.

The Republic of Kazakhstan is the ninth largest territory in the world is located near the center of Eurasian continent and neighbors on Russia, China, Iran and Afghanistan. Central Asia was on the periphery of international process during the first years of independence. Kazakhstan is Central Asia's economic leader. Its gross domestic product (GDP) is greater than that of other four republics combined⁶.

After strong lobbying Kazakhstan has attained chairmanship of the Organization for Security and Cooperation in Europe (OSCE) in 2010. However, political reforms have not kept pace with economic development. Power remains concentrated in Nazarbayev's hands, and opposition politicians come under intense pressure. There is a common interest in preserving stability that may contribute

⁵ Dina R. Spechler and Martin C. Spechler, Central Asia. *Trade, energy, and security in the Central Asian arena*, Seattle: National Bureau of Asia Research, USA 2006, p. 206.

⁶ "Central Asia's energy risks", 2007,, http://www.crisisgroup.org/~media/Files/asia/central-asia/133_central_asia_s_energy_risks.ashx, access July15 2010.

towards mitigating disputes. Fortunately, the country as a whole is stable, and the leadership is aware of the potential problems.

Uzbekistan is the second largest natural gas producer in the Commonwealth of Independent States (after Russia) and one of the top ten natural gas-producing countries in the world⁷. Uzbekistan produces natural gas from 52 fields in the country, with 12 major deposits, accounting for over 95% of Uzbekistan's natural gas production⁸. Uzbekistan is probably the country with the greatest risk of instability among Central Asian states. The regime of President Islam Karimov is one of the most repressive in the former Soviet Union. More than anything, its economic policies have angered the population of over 26 million⁹.

1.2. Motivation

Ever since the breakup of the USSR, the Central Asia States has generated intense geopolitical interactions as the new states have sought to create allies to assure their sovereignty and as external actors have been engaged in the struggle for influence. This multi-actors competition has always been and is more complex than 19th century “Great Game” between the Russian and British empires for dominance in Central Asia. The main difference from old geopolitics is in the main object of competition: it is not anymore about the territory issue but about hydrocarbon resources. Great powers' like the USA, China, Russia, Europe, and the key neighbors like Iran, are engaged in competition for these resources.

World economy, despite on temporarily crisis, is rapidly growing. Competition for energy resources is becoming a key to economic and political prosperity of countries. The politics of energy have been instant foundation to the political and

⁷ Statistical Review of World Energy 2008, www.bp.com “BP Statistical Review of World Energy 2011” British Petroleum , http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf, access July 15 2011.

⁸ Polska Agencja Rozwoju Przedsiębiorczości “Uzbekistan – Przewodnik dla przedsiębiorców” 2006, <http://www.parp.gov.pl/files/74/81/105/uzbekistan.pdf>, access July 15 2010.

⁹ Ibid.

economic development of the Central Asia region from the very first days of independence. Indeed, the energy security of the nations in the region has been at the heart of their efforts to build sovereign and prosperous states. For producers, the arrangements of governing the exploration and transportation to world markets of their energy resources has been a central element of their foreign policies, and in fact has largely effected their level of meaningful sovereignty. For consumers of energy, levels of dependence on energy-endowed powers have been equally important in determining their ability to formulate their domestic and foreign policies independently.¹⁰

Thus, the author does believe that further developments in frame of competition for influence in rich by natural energy resources region of Central Asia will have a significant impact on the world economic and political relationships.

1.3. The Purpose of Research and Research Questions

The main purpose of this research is to analyze the interacting factors, which influence the situation of natural gas recourses in post-Soviet area in Central Asia. This paper gives contribution for Taiwanese science in terms of presenting recent situation in that vulnerable and important region in the world. This master thesis could be useful for these researchers which are working on the problem of supplies of natural gas in terms of geopolitical context; as well as could be used as additional reading material for the courses related to the political and economical development of Central Asia States. In particular; the following interacting factors will be the objects of the analysis:

1. Geographical circumstances in Central Asia: the author will describe main geographic obstacles and chances for countries which are located in Central Asia region and analyze whether that location is friendly to secure their political and economical

¹⁰ Svante Cornell, and Niklas Nilsson , *Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives*, Washington D.C.: CACI-SRSP, 2007, p.7.

development or not. Capacity of natural gas resources in Central Asia: the author will examine the capacity of natural gas reserves which are located in Central Asian region and which country could be considered as the richest in terms of gas resources.

2. Energy state policy of individual states: the author will describe energy strategies of each country and its implementation.
3. Localization and technical condition of gas transportation infrastructure: old, present, and progress and in future projects. Geopolitical circumstances, transportation projects in implementation that determinates main geopolitical circumstances, which create a significant impact on the results for Central Asian region and rest of the world.

The main research questions of the thesis are:

1. What is the degree of dependency of central Asian States to Russia in frame of natural gas issue?
2. Whether the geopolitical competition between Russia, China, U.S., E.U, and Iran (through the prism of natural gas distribution) is a threat or chance for economic and political development of Central Asian states?

1.4. Literature Review

There are quite an amount of empirical literatures written about Central Asian energy issues such as books, articles, official documents. Below the author will briefly describe the main points of the most substantial works that were used during this research. As well during the research amount of *statistical data* was implemented.

1.4.1 Books

Jonathan P. Stern “The Future of Russian gas and Gazprom”¹¹ – this book examines developments in the Russian gas industry since the late 1990s in a domestic and international context and likely developments over the next two decades. Russian gas deliveries will expand from a domestic, CIS and European focus, to a global role encompassing Asian and global markets. Over the same period Gazprom has the potential to become Russia’s first multinational energy – oil and gas – company.

Eugene Rumer and Dmitri Trenin “Central Asia: Views from Washington, Moscow, and Beijing”¹² – the book offers a four-part analysis of the region’s new importance in world affairs. Authors examine the place of Central Asia in a global perspective. They look at the region from the standpoint of traditional hegemon Russia, new player United States and new economic superpower China.

Robert Ebel and Rajan Menon “Energy Conflict in Central Asia and the Caucasus”¹³ – this book examines the relationship between competition for energy resources and the propensity for conflict in the Caspian region, taking the discussion well beyond issues of pipeline politics and the significance of Caspian oil and gas to the global market. The book examines the impact of energy wealth on political life and the economies of Azerbaijan, Kazakhstan, and Turkmenistan. In several chapters authors discuss the ways in which Russia, China, Iran, and Turkey are attempting to uphold their energy interests in the newly independent states, and the impact of competition for production contracts and pipeline routes on regional security.

Adam N. Stulberg “Well-oiled diplomacy: strategic manipulation and Russia’s energy statecraft in Eurasia”¹⁴ – this book examines Russia’s mixed success at

¹¹ Jonathan Stern, *The Future of Russian Gas and Gazprom*, Oxford: Oxford University Press, 2005.

¹² Eugene Rumer and Trenin Dmitri “Central Asia: Views from Washington, Moscow, and Beijing”, Armonk, N.Y. : M.E. Sharpe, Inc., 2007.

¹³ Robert Ebel and Menon Rajan “Energy Conflict in Central Asia and the Caucasus”, New York, N.Y. : RoutledgeCurzon, USA 2004.

¹⁴ Adam N Stulberg, “Well-Oiled Diplomacy: Strategic Manipulation and Russia's Energy Statecraft in Eurasia,” New York: State University of New York Press, 2007.

leveraging energy advantages in Eurasia from 1992 to 2002. Stulberg illustrated in several case studies, including Russia's successful natural gas diplomacy toward Turkmenistan and Kazakhstan.

Ian Wybrew-Bond, Jonathan Stern "Natural Gas in Asia: The Challenges of Growth in China, India, Japan and Korea"¹⁵ – this book assesses the economic opportunities, political obstacles and other challenges to these projects. In order to succeed, huge pipeline infrastructure will need to be built over long distances to bring gas to these markets, as well as significant numbers of new LNG terminals. There are chapters on the major current and potential gas markets in Asia: China, India, Japan and Korea, as well as chapters on the potential supply of pipeline gas and LNG to Asia from: Russia, Siberia, and the Far East the Far East and a number of Central Asian and Middle Eastern countries.

Simon Pirani "Russian and CIS Gas Markets and their Impact on Europe"¹⁶ – a book dealing with gas markets not only in Russia but in the Commonwealth of Independent States as a whole could not be more timely There are chapters about of the potential fragility of Central Asian gas contracts with Russia and other potential customers. There are also chapters about development of gas production and gas markets in Caspian and Caucasus countries and it substantial importance to any fourth corridor through which additional gas supplies might flow to Europe.

David G. Victor and Mark H. Hayes "Natural Gas and Geopolitics: From 1970 to 2040"¹⁷ – this book investigates the implications of this shift, utilizing historical case studies as well as advanced economic modeling to examine the interplay between economic and political factors in the development of natural gas resources. The contributors aim to shed light on the political challenges, which may accompany a shift to a gas-fed world.

¹⁵ Ian Wybrew-Bond, Jonathan Stern, *Natural Gas in Asia: The Challenges of Growth in China, India, Japan and Korea*, Oxford: Oxford University Press, 2008.

¹⁶ Simon Pirani, *Russian and CIS Gas Markets and their Impact on Europe*, Oxford: Oxford University Press, 2009.

¹⁷ David Victor and Mark Hayes, *Natural Gas and Geopolitics: From 1970 to 2040*, Cambridge: Cambridge University Press, 2006.

Michael P. Croissant and Bulent Aras “Oil and Geopolitics in the Caspian Sea Region”¹⁸ – this book is describe the scramble for access to the vast energy riches of the Caspian Sea basin on the part of regional and global powers has become one of the most important geopolitical developments of the post-Cold War era. This essay collection offers diverse interpretations of the struggle for Caspian oil and gas.

Akiria Miyamoto “Natural gas in Central Asia: industries, markets and export options of Kazakhstan, Turkmenistan and Uzbekistan” – the book represents a comprehensive study examines the recent development of the three major gas resource countries in Central Asia. The author assesses the strategies likely to be taken by the Central Asian gas industry, especially with regard to pipeline construction.

William Byrd and Martin Raiser “Economic cooperation in the wider Central Asia region”¹⁹ – this book examines big issues that affect regional cooperation and development in Central Asia region. One of the chapters analyzes the development and trade of energy resources in the wider Central Asia region. The Author focuses on energy security, energy transmission networks, infrastructure and institutions.

Sally Cummings “Oil, Transition and Security in Central Asia”²⁰ – by this book the author approaching Central Asia from the perspective of geopolitics, transition, oil and stability, the authors provide a very broad and diverse analysis of the region, examining domestic and international developments since 1991. The book both provides an introduction to the region and presents advanced research on international pipeline projects, political risk and developments.

¹⁸Akiria Miyamoto, *Natural gas in Central Asia: industries, markets and export options of Kazakhstan, Turkmenistan and Uzbekistan*, Oxford: Oxford University Press, 2008.

¹⁹William Byrd and Martin Raiser, *Economic cooperation in the wider Central Asia region*, Washington, D.C. : World Bank, 2006.

²⁰Sally Cummings, *Oil, Transition and Security in Central Asia*, New York, N.Y. : Routledge, 2003.

1.4.2 Articles

Shamil Midkhatovich Yenikeeff "Kazakhstan's gas: export markets and export routes"²¹ - the article is focusing on Kazakh gas export potential, also encompassing more general political and energy issues.

Crisis Group Asia Report "Central Asia's Energy Risks"²² - the article is about three oil and gas producers in the Central Asia – Kazakhstan, Turkmenistan and Uzbekistan. This overview of energy export, producing raw materials, and internal stability in that region.

Vladimir Paramonov and Aleksey Stokov "Structural Interdependence of Russia & Central Asia in the Oil and Gas Sectors"²³ - this article is about the cooperation between Russia and the countries of Central Asia in the oil and gas sphere. The authors believe that this cooperation is the legacy of structural interdependence between these countries in the oil, gas, water and electricity sectors bequeathed by the centrally-planned command economy of the Soviet Union.

Vladimir Paramonov "The future supply of gas from central Asia to Russia: an expert assessment"²⁴ - this article is about the supply of gas from Central Asia to Russia; and shows main performance indicators of gas sectors of Central Asian countries and plans for the future.

Stanislav Chernyavsky "Central Asian an Era of Change"²⁵ - this article heightened tensions in Central Asia are due to internal and external factors. The external factors for the rise in tensions include the seizure of local resources by large

²¹Shamil Midkhatovich Yenikeeff, "Kazakhstan's gas: export markets and export routes", 2008, <http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2010.

²² Crisis Group Asia Report "Central Asia's Energy Risks", Asia Report N°133, <http://www.crisisgroup.org/en/regions/asia/central-asia/133-central-asias-energy-risks.aspx>, access July 2011

²³Vladimir Paramonov and Stokov Aleksey, The Defense Academy is the United Kingdom "Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf), access July 15 2010.

²⁴Vladimir Paramonov "The future supply of gas from central Asia to Russia: an expert assessment", <http://www.da.mod.uk/colleges/arag/document-listings/ca/08%2804%29JP.pdf>, access July 15 2010

²⁵ Chernyavsky Stanislav "Central Asian an Era of Change", http://eng.globalaffairs.ru/number/n_6188, access July 15 2010.

transnational companies, as well as the direct involvement of new actors on this stage: the United States, member countries of the European Union, as well as China and Turkey.

Marco Giuli "Nabucco pipeline and the Turkmenistan conundrum"²⁶ - this paper aims to explore the prospects for Turkmen natural gas participation in the Nabucco pipeline project. Article emphasizes that despite the improved political landscape in Turkmenistan, several obstacles still persist: among them, the commitment of the new leadership to supply Russia and China as well as the weak prospects for the Trans-Caspian pipeline.

Martha Brill Olcott "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan"²⁷ - this paper explores the reasons why Turkmenistan has found it so difficult to market its gas. It looks at the relative roles played by geopolitical factors, the economics of transport and sale of gas, and how these affected the routes Turkmenistan currently uses, as well as the projects that were put on hold.

Stephen Blank "Energy, Economics, and Security in Central Asia: Russia and Its Rivals"²⁸ - this article attempts to trace the importance of the new forces unleashed by the advent of Central Asian States by focusing on the struggle around energy and security issues involving them.

Aleksandra Jarosiewicz and Maciej Flakowski "The Great Game around Turkmenistan"²⁹ - this article is about competitors in the 'Great Game', to gain political influence in Turkmenistan and access to hitherto unexploited Turkmen deposits of gas and oil. The authors pointed out that a new stage in the Great Game, which has been played for influence in Central Asia and control of access to its energy

²⁶ Giuli Marco "Nabucco pipeline and the Turkmenistan conundrum", http://www.cria-online.org/Journal/4/CRIA_Summer%2008_Whole%20Issue.pdf, access July 15 2011.

²⁷ Martha Brill Olcott, "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan" http://www.rice.edu/energy/publications/docs/GAS_InternationalGasTradeinCentralAsia.pdf, access July 15 2011.

²⁸ Stephen Blank, 1995, "Energy, Economics, and Security in Central Asia: Russia and Its Rivals", <http://www.strategicstudiesinstitute.army.mil/pdf/files/pub119.pdf>, access July 2011.

²⁹ Jarosiewicz Aleksandra and Flakowski Maciej, "The Great Game around Turkmenistan", http://www.osw.waw.pl/sites/default/files/punkt_widzenia_17.pdf, access July 15 2011.

resources for many years have been launched, and Turkmenistan has become the main setting for it. The major actors involved are Russia, the United States, China and the European Union.

Michael Fredholm "The Russian energy strategy & energy policy: pipeline diplomacy or mutual dependence?"³⁰ - this article is about the Russian energy policy, export of energy and Russia's strategic needs with regard to the energy industry (such as pipelines, export ports, and refineries).

Vladimir Paramonov and Aleksey Stokov "Russian oil and gas projects and investments in Central Asia"³¹ - the article represents a review of the current condition of the project and investment activity of Russia and Russian companies.

Dina R. Spechler and Martin C. Spechler "Trade, Energy, and Security in the Central Asian Arena"³² - this article examines whether the economic structures, socio-political conditions, resources, and trade patterns of Central Asia are likely to generate significant regional or international conflict in the coming decade.

1.5. Methodology and Approach

In order to examine the main steps of interaction process between Central Asian countries and main players on international arena such as China, USA, Russia European Union, etc. from 1991 till present, the author will follow by concepts of most *geopolitical approach* in particular, data analysis, identification of origin date, then evidence of localizations. In frame of this method the interpretation of facts is mainly based on chronological principle in combination with topical. In addition, the author approaches the issues within the historical context in order to provide solid

³⁰Michael Fredholm "The Russian energy strategy & energy policy: pipeline diplomacy or mutual dependence?," <http://www.da.mod.uk/colleges/arag/document-listings/russian/05%2841%29-MF.pdf> , access July 15 2011.

³¹Paramonov Vladimir and Aleksey Stokov "Russian oil and gas projects and investments in Central Asia", <http://www.da.mod.uk/colleges/arag/document-listings/ca/08%2819%29VP%20English.pdf> ,access July 15 2011.

³² Dina R. Spechler and Martin C. Spechler "Trade, Energy, and Security in the Central Asian Arena", http://www.nbr.org/publications/strategic_asia/pdf/Preview/SA06/SA06_C_Asia_preview.pdf , access July 2011

foundational background for clarification of examined issues. However the main emphasis is on the current situation and trends linking the historical context with present situation. The location of the resource also acquires importance, in a certain territory and not in others – there lies the specificity of the territory - and to this, its value as a strategic resource has to be added the high degree of incidence in the economic development of a given country due to its direct use of energy in industrial, residential and commercial activities.

The central problem in the regional level is the instability in internal politics of each country and in the relations among countries of the region. It generates legal insecurity and this makes it difficult the regional integration processes. This point of view becomes important to the strategic roll of gas as a critical variable in the regional level and to the facts that it transforms into critic the use of the resource gas in this level. Its use is determinate by concrete political and economic decisions.

As well this study implementing so called *qualitative method* such as investigation *why* and *how* of decision making, not just *what*, *where*, *when*, direct observation case studies, analysis of documents and materials.

In addition, by using *comparative method* – according: attitude toward another state, economic and political potential of the main actors and the amount of natural gas of each state. The author is trying to compare energy strategies of Central Asian countries and their significant partners such as Russia, China, USA and European Union. Author provides with estimation of energy policy of mentioned above countries and analyzes its effectiveness.

1.6. Limitations

Content of this research is limited by the lack of access to some resources due to special permission, which is required by authorities.

The main scope of covered by this work data and resources are conducted on English, Russian languages. However, the recourses conducted on Central Asian languages remain uncovered due to author's limited ability to understand them; and they are still the subjects of exploration.

The limitations of this study includes the difficulties to collect first hand information, such as interview, and access to up to date data, the regulations of volume of the Master's thesis; as well as limited possibilities to analyze periodical materials written on Central Asian Languages. However, the author believes there are further theoretical studies should be done on the topic of this research due to its huge influence on the behavior and strategy of the main actors on international arena.

1.7. Structure of Thesis

First component of this study introduces the subject of the thesis and explains its background, motivation, objectives and main research questions, as well as employed methodology and consulted sources.

Next chapter two is describing the capacity of Central Asian states in terms of natural gas resources, surveys related to its geographical conditions and obstacles, like lack of sea or mountainous of terrain. It also tackles the problem of infrastructure – the most fragile base for gas industry in this region and focuses on network of gas pipelines, which is the key to understanding of energy policy in CAS.

Subject of chapter three is Central Asian states' dependency on Russia. This old dependency inborn from Soviet era, and is based on “Central Asia Center” gas network and is used by Russia to exploit Central Asian natural gas resources. This chapter tries to answer the question how these states attempt to overcome this old dependency.

Chapter four introduces the issue of new dependency of Central Asian states, mostly on China. China has become a new sponsor able to build new gas pipelines from Central Asia. This new developed infrastructure allowed Central Asian States to diversify possibilities to sell their gas for better price. In this chapter the other actors mentioned such as USA, European Union and Iran. Even though their plans have not fully developed as yet, they pose a real alternative for the future.

Last part of this paper is a concluding chapter. It discusses the results and provides a combined analysis of theoretical and empirical aspects of this paper and also perspective for future research on this subject.



Chapter 2 Natural gas in CAS

2.1. Gas Capacity in CAS

Central Asia has significant proven reserves of oil (1–2% of the world total, perhaps more with further exploration) and 3.8% of proven gas reserves³³. These totals are approximately the same as those of the North Sea. However Central Asia's output will probably never reach that of Norway and the United Kingdom owing to logistical, technical, financial, and political problems. Predicted gas production in 2010 might reach 210 bcm per year, about 2–3% of world consumption³⁴. Though modest, these energy supplies have regional importance and offer alternative sources should other regions falter. See figure 2.1



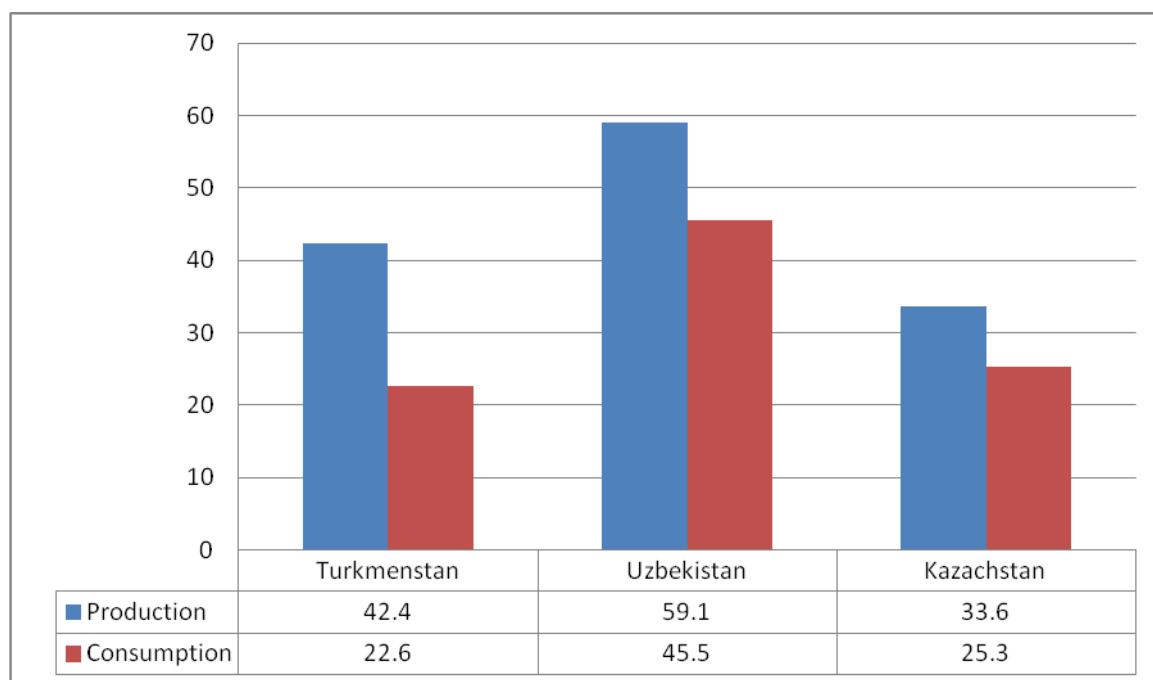
Sources Statistical Review of World Energy 2010, British Petroleum

Figure 2.1 Central Asia Natural Gas Balances – proven reserves (Tcm)

³³ Dina R. Spechler and Martin C. Spechler "Central Asia. Trade, energy, and security in the Central Asian arena", USA: National Bureau of Asia Research, 2006, p.215

³⁴ Dina R. Spechler and Martin C. Spechler, *Central Asia. Trade, energy, and security in the Central Asian arena*, Seattle, National Bureau of Asia Research, 2006, p.215.

This figure shows which country in the region, has the most significant proven reserves of natural gas. Turkmenistan as a biggest potential player has many possibilities, but to reach these possibilities is necessary to build new pipelines and refineries.



Sources: Statistical Review of World Energy 2010, British Petroleum

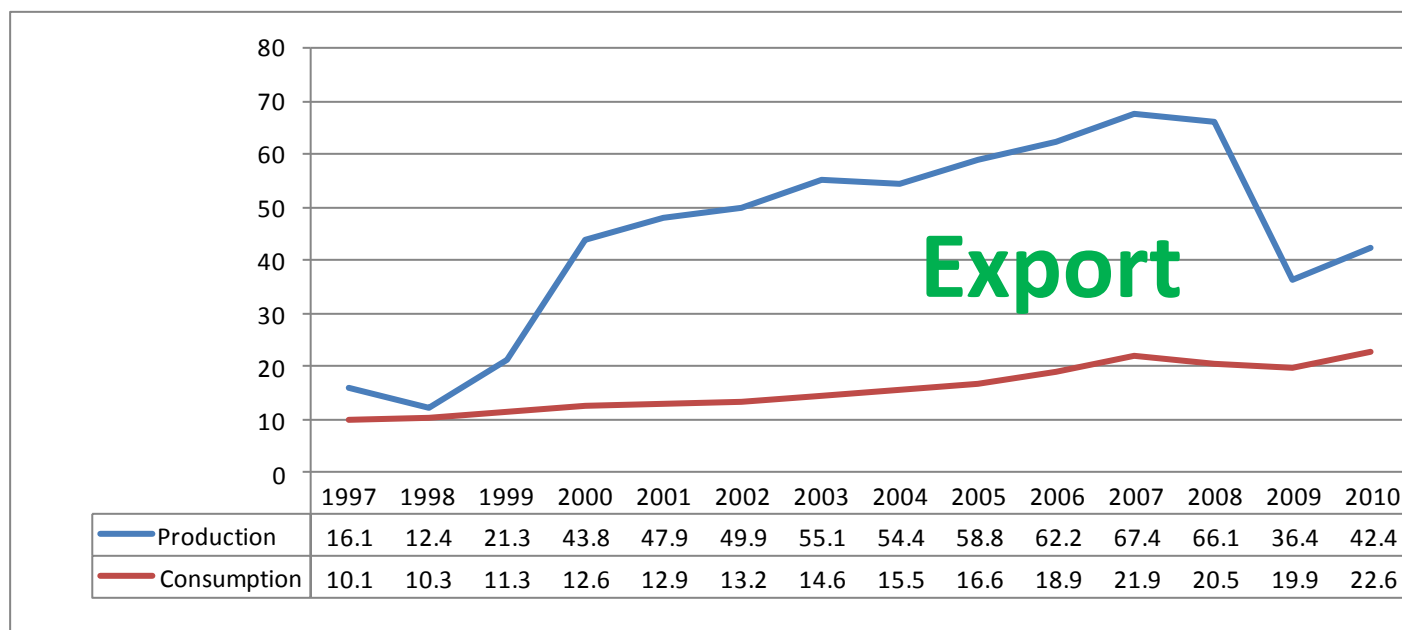
Figure 2.2 Central Asia Natural Gas Balances in 2010 (Bcm)

This figure shows which country in the region is the biggest net importer of gas. Most of the natural gas CAS states export to Russia and next European Union. From 2009 China joined these actors. Turkmenistan is the biggest beneficiary of that change.

Turkmenistan is a country most important (See figure 2.2) to world energy markets because of its big oil and natural gas reserves. In fact, the whole territory of Turkmenistan appears to be one big oil-gas field (See map 2.1). Turkmenistan is the largest Central Asia gas exporter and has relatively small population (about 4 million³⁵). Turkmenistan could become a major world energy producer and exporter over next decade. See graph 2.1

³⁵ Glenn E. Curtis, "Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan- country studies" USA, 1997, p. 293.

At the end of 2010 British Petroleum (BP) revised upwards its estimate of proved natural gas reserves in Turkmenistan to 2.8 trillion cubic meters, which accounts for 1.5 % of world's reserves³⁶. This estimate is putting the country on a par with Norway (1.7%). Most of Turkmenistan's natural gas reserves are located in the Amu Darya basin in the east, the Murgab Basin, and the South Caspian basin in the west.



Sources Statistical Review of World Energy 2010, British Petroleum

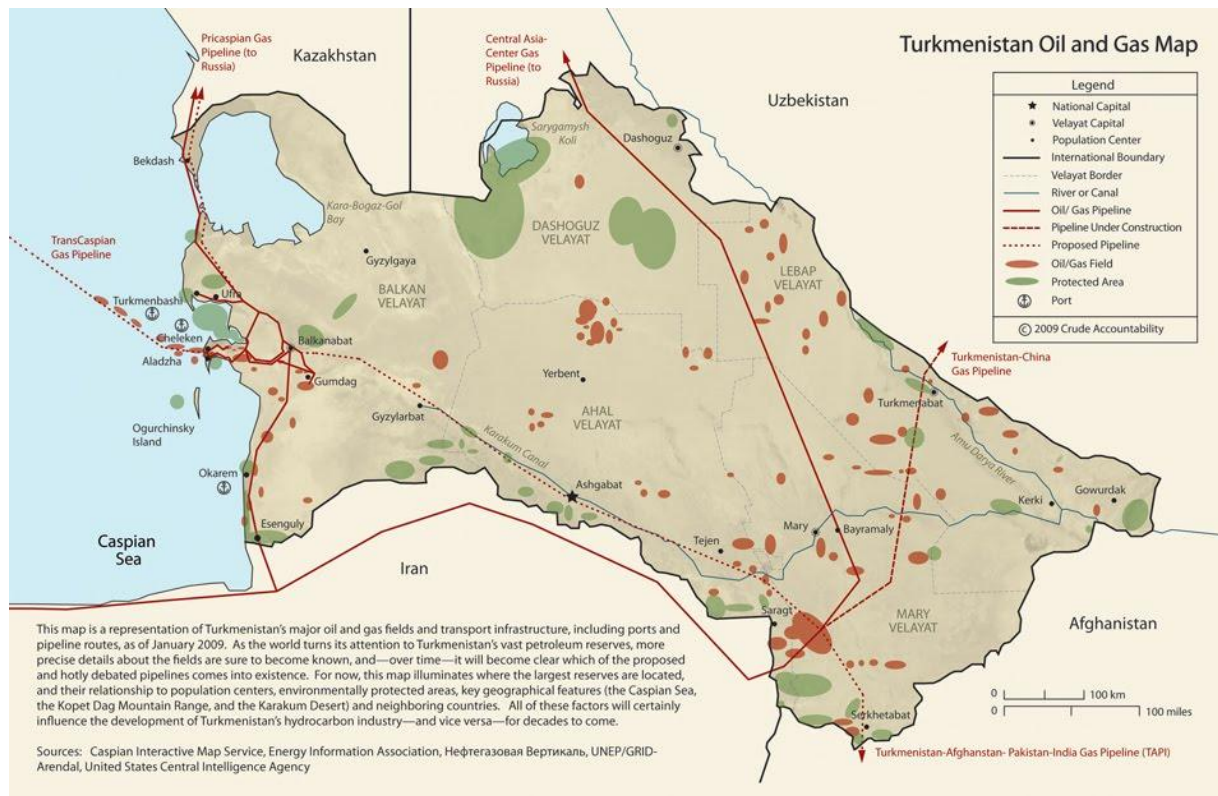
Graph 2.1 Gas Consumption and Production in Turkmenistan (Bcm)

The Turkmen governments together with several foreign companies are planning to produce offshore associated gas reserves from its section of the Caspian Sea. Turkmenistan has committed itself to exporting 50 bcm per year to Russia under 25-years contract³⁷. Therefore, Turkmenistan's short-to mid-term objectives is to develop an independent natural gas export infrastructure that does not have to pass through Russian territory. It also agreed to provide China with 30 bcm annually for 30 years starting in late 2009³⁸. Next step is to build new pipeline to Europe.

³⁶ BP Statistical Review of World Energy 2011" British Petroleum ,http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf, access July 15 2011.

³⁷ Morten Anker, Baev Pavel, Brunstad Bjorn , Overland Indra and Torjesen Stin , *The Caspian Sea Region Towards 2025*, The Netherlands, Asmsterdam: EburonNederland, 2010, p.65.

³⁸ Ibid., p 30.



Sources: **ROGTEC Magazine**

Map 2.1. Turkmenistan Oil and Gas

Turkmenistan's output dropped throughout the 1990 from 57.7 bcm to 13.2 bcm in 1992³⁹. In 1999 in the wake of Turkmen-Russian agreement production skyrocketed to 21.3 billion cubic meters and continued to increase before reaching an estimated 62.2 billion cubic meters in 2006 - placing the country as the second largest gas producer after Russia in the former Soviet bloc⁴⁰.

All major gas fields in Turkmenistan have been producing for more than 25 years and are running low. If the quantity extracted does not enable the quotas for Russia and China to be met, Turkmenistan will face a difficult problem: which customer to satisfy? This could cause problems for cooperation in the energy sector for the entire region, not only between Russia and Turkmenistan but also between Russia and China.

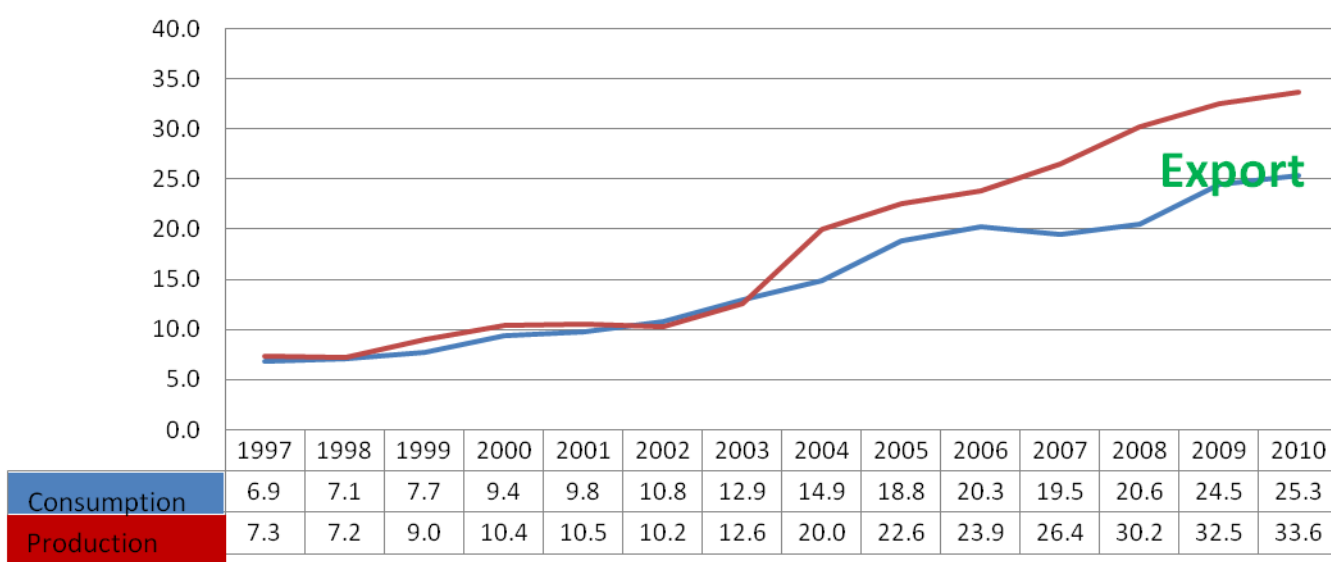
Kazakhstan is a country important to the world energy markets because of its big reserves. In terms of proven reserves of natural gas rank it among the world's top

³⁹ "Нефтегазо-вая Вертикаль" <http://www.ngv.ru/article.aspx?articleID=22567>, access July 15 2010.

⁴⁰ U.S. Energy Information Administration, <http://www.eia.doe.gov/cabs/Centasia/NaturalGas.html>, access July 15 2010.

20⁴¹ couturiers. With population 17⁴² million people, Kazakhstan can allow itself to become a main natural gas exporter in Central Asia. See graph 2.2

After years of foreign investment into the country's oil and natural gas sectors, the landlocked Central Asian state has recently begun to realize its enormous production potential. The main oil gas company in Kazakhstan is state-run KazMunNaiGas⁴³. Kazakhstan could become a major world energy producer and exporter over the next decade. Main destination for Kazakhstan gas is Russia and Ukraine. Kazakhstan exports most of its gas volumes through KazRosGaz which at present has a *de facto* monopoly on gas exports from Kazakhstan.⁴⁴ KazRosGaz is a joint venture between Gazprom (50%) and KaZmuNaiGaz (50%).



Sources: Statistical Review of World Energy 2011, British Petroleum

Graph 2.2 Gas Consumption and Production in Kazakhstan (bcm)

⁴¹ Anne Peck, , *Economic development in Kazakhstan*, New York : RoutledgeCurzon, 2004 p.193.

⁴² Robert E. Ebel, *Energy choices in the Near Abroad*, Washington, D.C. : The CSIS Press, 1997, p.69.

⁴³ КазМунайГаз http://www.kmg.kz/page.php?page_id=1009&lang=2, access July 15 2010.

⁴⁴ The Oxford Institute for Energy Studies <http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2010.

At the end of 2010, British Petroleum (BP) revised upwards its estimate of proved natural gas reserves in Kazakhstan to 1.8 trillion cubic meters⁴⁵, with estimated undiscovered reserves of 6.2 trillion cubic meters⁴⁶. These estimates are putting the country on par with Turkmenistan. Most of Kazakhstan's natural gas reserves are located in the west of the country, with roughly 25 %⁴⁷ of proven reserves situated in the Karachaganak field. Karachaganak field located about 150 km east from the city of Oral (Uralsk) in the northwest of Kazakhstan (See map 2.2). It is estimated to contain 1.2 trillion cubic meters of gas and 1 billion tones of liquid condensate and oil⁴⁸.



Sources : Energypedia

Map 2.2 Main gas field Kazakhstan

⁴⁵“BP Statistical Review of World Energy 2011” British Petroleum , http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf , access July 15 2011.

⁴⁶ Croissant, Michael and Aras Bulet, *Oil and geopolitics in the Caspian Sea region*, Westport, Conn.: Praeger, 1999 p.182.

⁴⁷ Energy Information Administration <http://www.eia.doe.gov/cabs/Kazakhstan/NaturalGas.html>, access July 15 2011.

⁴⁸ Chamber of Commerce and Industry of the Republic of Kazakhstan in the USA, <http://kazcham.com/?p=128>, access July 15 2011.

Second larger Kazakhstan natural gas and oil field is Tengiz (See map 2.2) located in northwestern Kazakhstan's low-lying wetlands along the northeast shores of the Caspian Sea. The country is poised to become a net exporter in 2008⁴⁹.

Uzbekistan has smaller proven reserves, but is an established producer with registered output of 55.8 bcm⁵⁰. Of this total 6, 5 bcm is exported, mostly to neighboring states, creating an important lever as well as irritant to these states' mutual relations⁵¹. At the end of 2010 British Petroleum (BP) revised upwards its estimate of proved natural gas reserves in Kazakhstan to 1.68 trillion cubic meters⁵². Uzbekistan because high domestic consumption and large losses due ailing infrastructure, gas export account only about 20% of production⁵³. Most of the export goes to Russia, with some to Tajikistan and Kyrgyzstan as well. The export potential seems to be drying up. Uzbekistan is therefore no petroleum superpower, although it does play a limited role in the natural gas sector. In longer – term perspective, Uzbekistan will have to step up its output if it is to remain a net exporter.

Uzbekistan produces similar amount of gas to Turkmenistan. But much larger population (23 millions⁵⁴) implies that much less gas is available for export due the greater domestic requirements. See graph 2.3

Also is greater difficulty in co-opting popular support with smaller amount of export revenue. Its other staple commodity is cotton. Hence Uzbekistan conforms less closely to model of a rentier economy or state more to one of simple repressive autocracy.

⁴⁹ Energy Information Administration, <http://www.eia.doe.gov/cabs/Kazakhstan/NaturalGas.html>, access July 15 2011.

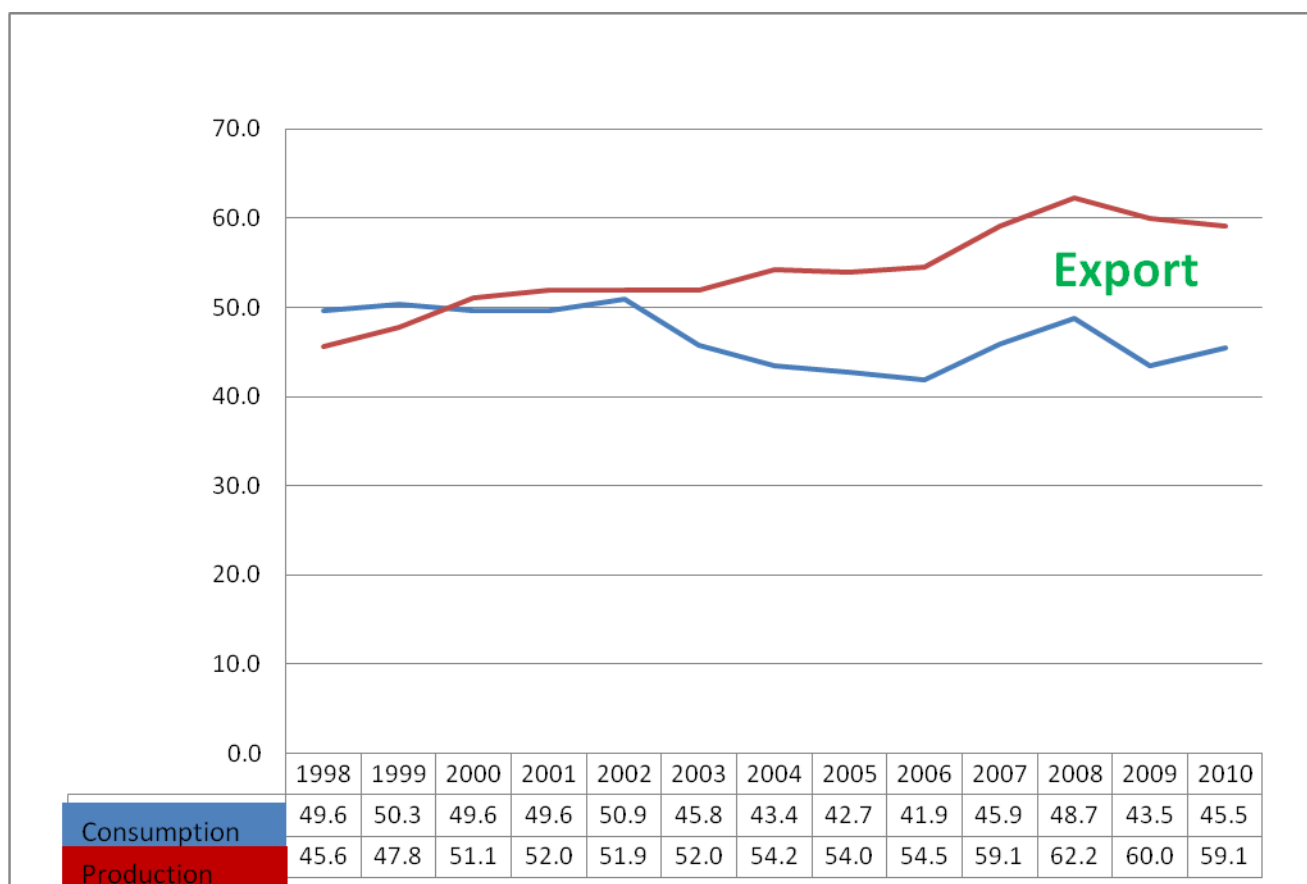
⁵⁰ BP Statistical Review of World Energy 2011” British Petroleum , http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf, access July 15 2011.

⁵¹ Dina R. Spechler and Martin C. Spechler Central Asia. *Trade, energy, and security in the Central Asian arena*, Seattle: National Bureau of Asia Research, 2006, p. 205.

⁵² “BP Statistical Review of World Energy 2011,” British Petroleum , http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf, access July 15 2011.

⁵³ Morten Anker, Baev Pavel, Brunstad Bjorn , Overland Indra and Torjesen Stin , *The Caspian Sea Region Towards 2025* , The Netherlands, Asmsterdam: EburonNederland, 2010, p. 31.

⁵⁴ Glenn Curtis , *Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan - country studies*, Washington, D.C. : Federal Research Division, Library of Congress, 1997, p. 377.



Sources : Statistical Review of World Energy 2011, British Petroleum

Graph 2.3 Gas Consumption and Production in Uzbekistan (bcm)

Uzbekistan's main problems are a lack of sufficient foreign investment, political instability and long geographical distances from consumers. Country is geographically far from the end-use markets they serve (e.g. Europe) and lack sufficient pipeline infrastructure to export more hydrocarbons. Uzbekistan and wants to diversify export routes for their resources outside of the Russian-controlled pipelines, but each of them must seek to obtain capital, technical assistance, and political support for alternative pipelines.

At present, Russian strategic interests mainly concern the three Central Asian states that possess commercial reserves of hydrocarbons: Kazakhstan, Turkmenistan and Uzbekistan. As yet no reserves of hydrocarbons in commercial quantities have been discovered in the other two countries of the region – Tajikistan and Kyrgyzstan, and for this reason Russian interests there are little concerned with questions of

extracting and importing hydrocarbons but are mainly aimed at opening the market for petroleum products.⁵⁵

Gazprom is the only real presence in Tajikistan. So far, no significant commercial reserves of oil and gas have been revealed. The high price of hydrocarbons is stimulating Gazprom's interest, firstly in the Tajik market for petroleum products and only secondly in the potential gas reserves of the country. In Kyrgyzstan, there is only one Russian company – Gazprom. No commercial reserves of oil and gas have been discovered so far in Kyrgyzstan⁵⁶

In 2003 Gazprom signed long-term (25 years)⁵⁷ cooperation agreements with the prime minister of Tadjikistan and Kirgizstan. Neither country is a major producer nor is consumer of gas and demand in both countries significantly less than 1 Bcm per year.⁵⁸ This is mostly imported from Uzbekistan. Both agreements joint development of exploration and production upgrading and expansion of facilities. Agreements also expressed in very general language, the possibility of Gazprom selling gas in both countries from its Uzbeks developments.

⁵⁵ Dr Vladimir Paramonov and Dr Aleksey Stokov The Defense Academy is the United Kingdom "Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf) access July 15 2010.

⁵⁶ Ibid.

⁵⁷ Gazprom, <http://www.gazprom.com/production/central-asia/>, access July 15 2011.

⁵⁸ Jonathan Stern, *The Future of Russian Gas and Gazprom*, Oxford: Oxford University Press, 2005, p. 81.

2.2. Gas Pipeline in CAS

Legacy after USSR, gas pipelines and plants. Old and present infrastructure.

The gas can be transported in two ways – through pipeline or as liquefied natural gas (LNG). Three kinds of pipelines can be defined—domestic, cross-border, and transit. The key in differentiating between the three types is the nature of the governing jurisdiction. Domestic pipelines are within an existing sovereign territory. *Sovereign* is defined as the national or regional ability to unilaterally abrogate agreements⁵⁹. Such pipelines are subject to the laws and regulations of that territory. Cross-border pipelines directly link the producer state of oil and gas with the consumer state. Transit pipelines cross a third sovereign territory to get to market. Normally the terms of transit are enshrined in an agreement that, among other things, determines the transit payments. These are payments made to the transit government. Normally payments include a transit fee, but they can also set the terms under which the transit country can lift off take.

LNG “Liquefied natural gas, or methane which has been converted to liquid phase by cooling it to -163°C. LNG is shipped in special carriers. One tone of LNG corresponds to roughly 1 400 cubic meters of natural gas in gaseous form under a standard condition”⁶⁰. Today, LNG accounts for only share 10 percent of trade - mostly in Asia⁶¹.

Construction of new routes of transmission is extremely costly. The carriage of LNG is competitive, if an alternative pipeline would have a length of more than 5 000 kilometers (or 3000 km, where the road leads into the sea)⁶². A majority of the world's LNG supply comes from countries with large natural gas reserves. These countries include Algeria, Australia, Brunei, Indonesia, Libya, Malaysia, Nigeria, Oman, Qatar,

⁵⁹The National Bureau of Asian Research, http://www.nbr.org/publications/specialreport/pdf/preview/SR23_preview.pdf, access July 15 2011.

⁶⁰Gassco, <http://www.gassco.no/wps/wcm/connect/Gassco-EN/Gassco/Home/om-gassco/> access July 15 2011.

⁶¹Wirtualny Nowy Przemysł, <http://www.wnp.pl/artykuly/gdzie-rura-nie-dojdzie-tam-lng,5121.html>, access July 15 2011.

⁶²Ibid.

and⁶³. If the gas is to be transported to remote regions of the world- particularly LNG - is the only option. Flowing from Arab countries to Japan, Taiwan or South Korea.⁶⁴

Speaking about the transport of large quantities of crude oil and natural gas on the surface, transport via pipelines is the only economically viable way. Compared to the other, it has a lower cost per unit. Although pipelines can be built even under the sea, it is very economically and technically demanding process, so most of this kind oil is transported by tankers at sea. Wherever possible, pipelines are built on the surface of the earth.

Pipelines and the rest of infrastructure date back to the times of Soviet Union. The countries of Central Asia are all connected through their gas pipelines with Russia. In Russia and Turkmenistan gas is sent mainly to gas pipelines. Central Asian Center gas pipelines built between 1960 and 1988 is controlled by Gazprom⁶⁵. Turkmenistan and other Central Asian countries do not have any other natural gas pipelines that would reach long-way customers in Europe and Asia bypassing Russia. Since all of the pipelines connecting the region to the world markets were owned by Gazprom, and routed through Russia, Turkmen natural gas was squeezed out of the market

Central Asia Center gas pipeline (See map 2.3) was built in 1960-1988 is controlled by Gazprom. Pipelines begin in the fields of oil and gas extraction and run through Russia before entering Europe. In Russia and Kazakhstan gas is being sent mainly by gas pipelines.

⁶³ California Energy Commission <http://www.energy.ca.gov/lng/faq.html#650>, access July 15 2011.

⁶⁴ Wirtualny Nowy Przemysl <http://www.wnp.pl/wiadomosci/69419.html>, access July 15 2011.

⁶⁵ Jonathan Stern, *The Future of Russian Gas and Gazprom*, Oxford: Oxford University Press, 2005, p.58.



Sources: HydrocarbonsTechnology.com

Map 2.3 Central Asia Center gas pipelines

On 2007, Russia, Turkmenistan and Kazakhstan agreed to construct a new Caspian pipeline⁶⁶ parallel to the existing CAC pipeline. See map 2.4. The pipeline will be built between Belek compressor station in Turkmenistan and Alexandrov Gay compressor station. Capacity of the new pipeline will be 20 bcm a year⁶⁷. Construction of the pipeline should be start in the second half of 2009, but has not started as of yet.

⁶⁶ Gazprom, Pre-Caspian gas pipeline <http://www.gazprom.com/production/projects/pipelines/pg/>, access July 15 2011.

⁶⁷ Kazakhstan Government site, Kazakhstan, Russia and Turkmenistan agree to renovate the Caspian gas pipeline, <http://en.government.kz/site/news/052007/16>, access July 15 2011.



Sources: Gazprom

Map 2.4 Russian planning gas pipeline in Central Asia - Pre-Caspian Project

Main hydrocarbon fields: Tengiz and Karachaganak are both located in western part of Kazakhstan. See map 2.5. Unfortunately, they are not connected with southeast and north of the country, where most of Kazakh population and industry are concentrated. Because of lack of infrastructure (refineries) Astana needs to export and reexport⁶⁸ its own gas via Orenburg which is located in Russia. This plant is processing 8 - 9 bcm of Kazakhstan's gas per year⁶⁹ (all Kazakhstan export). In Soviet times central administrators in Moscow considered Kazakhstan to be a transit area for the gas deliveries from Turkmenistan and Uzbekistan. As a result, the gas trunk pipelines did not cover the entire territory of Kazakhstan, and were not linked to a national network.

⁶⁸Adam N Stulberg „*Well-Oiled Diplomacy: Strategic Manipulation and Russia's Energy Statecraft in Eurasia*,” New York: State University of New York Press, 2007, p.118.

⁶⁹The Jamestown Foundation Kazakhstan's growing gas exports to go Russia's way
[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32749](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32749), access July 15 2011.



Sources: Gazprom, author

Map 2.5 Plant in Orenburg

In 2007, Russia and Kazakhstan reached an agreement on the Orenburg plant, which will be jointly owned by Gazprom and KaZmuNaiGaz. The Kazakh Company will pay 350 million USD for its 50% stake and will also invest an additional 250 million USD in the modernization of the plant's facilities, which will require a total estimated investment of 500 million USD⁷⁰. By 2012 the Orenburg processing plant will be upgraded to handle more gas from the Orenburg (Russia) and Karachaganak (Kazakhstan) hydrocarbon fields.

Russia tries to keep its monopoly in exporting Central Asian gas and denies another states independent access to the Central Asia. Russia buys about 58 bcm⁷¹ per year of Central Asian gas. "A recent agreement to pay market prices"⁷² for gas effective since 2009 will secure steady gas supplies for Gazprom and enable him to keep a middleman position to ship natural gas from Turkmenistan, Uzbekistan, and Kazakhstan to Russia and on to Europe.

Russia is afraid of the scenario in which her clients can find another supplier. Russia's way to reduce the potential competition is current construction of the gas pipeline from Eastern Siberia to China. .Siberian natural gas field could provide China

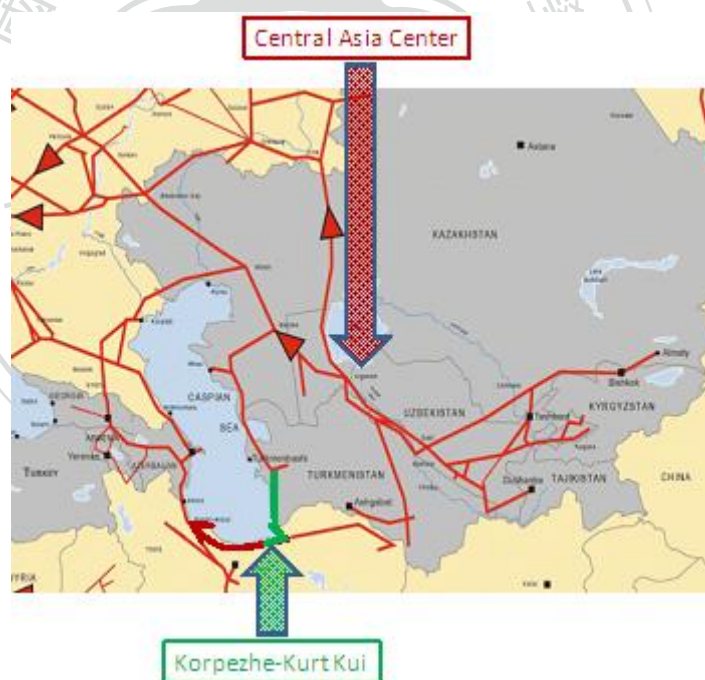
⁷⁰ The Oxford Institute for Energy Studies <http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2010.

⁷¹ EconoMonitor Energy Power Play: Courting Central Asia http://www.rgemonitor.com/economonitor-monitor/252525/energy_power_play_courting_central_asia, access July 15 2011

⁷² UK Reuters, Kazakhstan sees 70 pct gas price rise from 2009 <http://uk.reuters.com/article/oilRpt/idUKL1840067520080318>, access July 15 2011.

with natural gas in the next decade. “Since the natural gas would not arrive until 2012 at the earliest and since China is pursuing other natural gas import plans in the meantime, it is possible that Russian natural gas will not have a buyer”⁷³.

In 1997 Turkmenistan launched the \$190-million Korpezhe-Kurt Kui pipeline to Iran⁷⁴. See map 2.6 It is the first natural gas export pipeline in Central Asia to bypass Russia. This 200 km pipeline can reach Iran and other geographically close countries like Armenia or Azerbaijan. Its capacity is around 10-12 bcm⁷⁵ per year but deliveries to date have fallen far short this level. According to terms of the 25-year contract between Turkmenistan and Iran, 35%⁷⁶ of Turkmen gas pipe by this pipeline is a payment for Iran's contribution to building this project. “In 2001 Turkmenistan and Armenia signed an agreement”⁷⁷ to buy gas to Armenia via the Korpezhe-Kurt Kui pipeline and next across Iran.



Sources: Gazprom, author

Map 2.6 Korpezhe-Kurt Kui pipelin

⁷³ Energy Information Administration <http://www.eia.doe.gov/cabs/Russia/NaturalGas.html>, access July15 2010.

⁷⁴ The Jamestown Foundation, [http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=33590](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=33590) access July 2011.

⁷⁵ Sally Cummings, “Oil, Transition and Security in Central Asia”, U.K. 2003, p.152

⁷⁶ Energy Information Administration <http://www.eia.doe.gov/emeu/cabs/caspase.html> July15 2010.

⁷⁷ Ibid.

Competitive proposal to allow diversification gas transportation in Central Asia is Turkmenistan-Kazakhstan-China Pipeline. See map 2.7. In 2007, Kazakhstan and China reached an agreement on the construction and operation of the Kazakhstan-China gas pipeline network. The first pipeline (running through Southern Kazakhstan) will be the Kazakh section of the Turkmenistan–China gas pipeline. Turkmenistan will be the major supplier for the 7000 km pipeline. Kazakhstan, which hosts 1300 km of the pipeline, plans to extend its part in the future, connecting it to its own gas fields near the Caspian. Construction works of Kazakhstan section started on July 2008. Uzbekistan also started construction of its part this month while Turkmenistan launched its segment in 2007 ⁷⁸

The gas pipeline from Turkmenistan to China, which runs via Uzbekistan and Kazakhstan, was officially launched on 2009. Cost of construction – US\$6.7 billion ⁷⁹ Ownership – each section is owned by a company in which CNPC and the local partner hold 50% of shares.



Sources: HydrocarbonsTechnology.com

Map 2.7 Turkmenistan-Kazakhstan-China pipeline

⁷⁸ Upstream the international oil and gas newspaper <http://www.upstreamonline.com/live/article158831.ece>, access July 15 2011.

⁷⁹ Centre for Eastern Studies “The Turkmenistan-China gas pipeline considerably strengthens China's position in Central Asia” <http://www.osw.waw.pl/en/publikacje/eastweek/2009-12-16/turkmenistan-china-gas-pipeline-considerably-strengthens-chinas-posit>, access July 15 2011.

The launch of the pipeline is of great economic significance for the region because it offers the Central Asian states access to an alternative gas buyer to Russia, and because they can use this new position in negotiations with Gazprom to maximize their gas export revenues. The main consequence of this process is that Russia has lost some influence in the region while China has strengthened its position. The new gas pipeline is the result of the Central Asian states' policy of gaining more independence, and China's economic expansion in the region aimed at securing supplies of energy resources and building up its political influence, among other goals.

The new gas pipeline is around 2000 km long and will connect to a 5000 km-long internal Chinese gas pipeline (now under construction) at the Chinese-Kazakh border. Its target capacity, which it is planned to reach in 2012, is 40 bcm. This means that the pipeline will enable the Central Asian states to transmit a substantial portion of their gas exports to China (Central Asian gas exports totaled around 65 bcm in 2008). The pipeline's capacity may be increased to above 40 bcm. No information on the price of gas is available. The price discussed in January 2008 was around US\$195 per 1000 cubic meters⁸⁰.

Another planned project is Trans-Caspian Pipeline. See map 2.8. Proposed Trans-Caspian Pipeline would bypass both Russia and Iran to carry Turkmen gas across the Caspian Sea to Azerbaijan. This proposed pipeline could connect to the South Caucasus pipeline flowing gas to Turkey and then to the planned Nabucco pipeline to southeastern Europe (From Turkey to Austria). This project has several serious problems. None of which so far been resolved. European consortium led by Austrian OMV doesn't have enough financial recourse for starting build the pipeline. The implementation is always postponed to future. Next serious problem is the sources of supply.

⁸⁰ Centre for Eastern Studies "The Turkmenistan-China gas pipeline considerably strengthens China's position in Central Asia" <http://www.osw.waw.pl/en/publikacje/eastweek/2009-12-16/turkmenistan-china-gas-pipeline-considerably-strengthens-chinas-posit>, access July 15 2011.



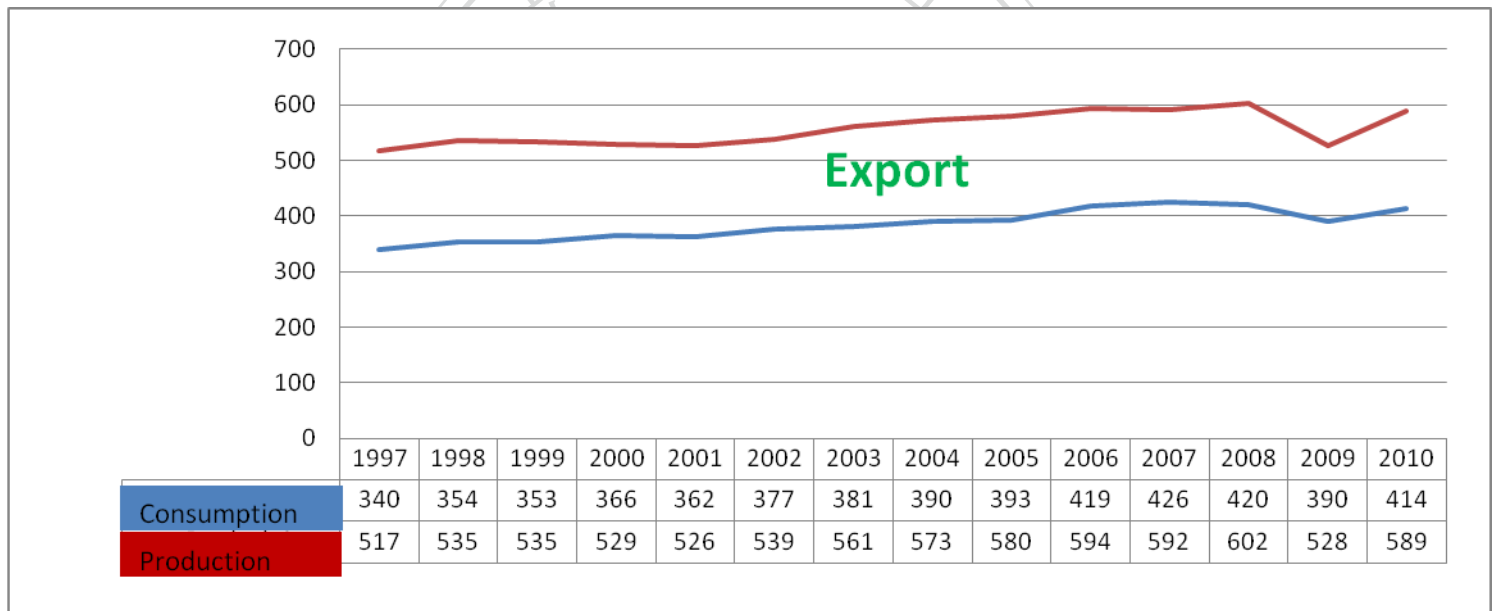
Sources: STRATFOR

Map 2.8 Possible Nabucco and Trans-Caspian Pipelin

Possible supplier – Turkmenistan has under big Russian pressure to reject European offer. Kazakhstan's attitude to the trans-Caspian project will depend on U.S. and European political support to Kazakhstan and Turkmenistan in the face of Russian pressure as well as on clearly attractive Western commercial offers to Kazakhstan and Turkmenistan. Until now that plans have not been put into operation.

Chapter 3 CAS Dependency on Old Russian Pipeline

Russia's economy is heavily dependent on oil and natural gas exports. Russia exports huge amount of natural gas. See graph 3.1 According to IMF and World Bank estimates, the oil and gas sector generated more than 60 percent of Russia's export revenues (64% in 2007)⁸¹. Exports of natural gas to Europe gives the most important benefits in Russia, because domestic prices are very low, do not even cover the cost of extraction. Exports 26 % raw material to the EU brings Russia (Gazprom) 60 % of revenues⁸². Russia's proven reserves of natural gas are higher than those of any other state, being 27 % of the global total, while Central Asia is a further 5%⁸³.



Sources Statistical Review of World Energy 2010, British Petroleum

Graph 3.1. Gas Consumption and Production in Russia (bcm)

Kremlin policy makers still show a tendency towards the state's influence in the energy sector⁸⁴. Taxes on oil and gas exports and extraction are high. Russia's state-influenced oil and gas companies are obtaining controlling stakes in previously

⁸¹ Energy Information Administration <http://www.eia.doe.gov/cabs/Russia/Background.html>, access July 15 2011.

⁸² Polityka, Krotki kurs gazownictwa, <http://www.polityka.pl/krotki-kurs-gazownictwa/Lead33,1091,279283,18/> access July 15 2011.

⁸³ Michael Wesley "Energy security in Asia," New York : Routledge, 2007 p.134.

⁸⁴ GlobalSecurity.org, <http://www.globalsecurity.org/military/world/russia/energy.htm>, access July 15 2011.

foreign-led projects. State-owned export facilities have grown fast, while private projects have progressed more slowly or have been obstructed by state-owned companies or by few government agencies. Private sector is being terrorized and forced to cooperate with Kremlin.⁸⁵ Foreign investors cannot enjoy clear rules and free market. Their activities are controlled by the Russian government.⁸⁶

The collapse of the former Soviet Union triggered unprecedented changes that galvanized and refashioned Central Asia. The countries that evolved from the dissolution of the Soviet Union, as well as countries that had to reform entirely because of their dependence of the Soviet Union (Moscow). The Russian strategic objectives in Central Asia have few similarities with those from the Soviet era. Russian aspirations for national prestige, present benefits and considerations about the future strategic prospects require the maintenance of Russia's more or less controlling influence over the southern belt of the Commonwealth of Independence States.

From 1991 Russia has been strengthening its control over the gas and oil pipelines. The Kremlin has been said to use its control of the pipelines "as a lever to control the regional states"⁸⁷. Economics and politics moved to main point of the agenda in terms of trade and transit of post-Soviet gas. The former Soviets states in Central Asia were compelled to create formal commercial relationships with Russia which did not exist during Soviet era. For the Russian Federation, two distinct markets have become important. Southern, cheaper sellers from the "near abroad" came from CIS countries or former republics. The other market was dominated by the attractive buyers from Europe.

Russia's continuous effort to subordinate Central Asia to its policies is the most strongly perceived aspect of this rivalry. However, Central Asian states are not helpless against foreign machinations. On the contrary, they are enhancing their ability

⁸⁵Khodorkovsky & Lebedev Communications Center, <http://www.khodorkovskycenter.com/> , access July 15 2011.

⁸⁶ Robert Amsterdam, Perspectives on Global Politics and Business

http://www.robertamsterdam.com/2008/03/bp_pulls_employees_from_russia.htm, access July 15 2011.

⁸⁷ Elizabeth Van Wie Davis, Azizian Rouben, *Islam, oil, and geopolitics: Central Asia after September 11*, Lanham, Md. : Rowman & Littlefield Publishers, Inc., USA 2007, p.207.

to deal freely with Russia's rivals. The creation of commercial relationships between CAS and Russia has been a painful process. Transit of natural gas is a key issue because all pipelines taking Central Asian gas to Europe pass through Russia.

Hence, Gazprom's complete control of those supplies. In the past, all Russian export to Europe was transited through Ukraine, and around 15 %⁸⁸ also passed through Moldova. With the opening of the Yamal pipeline Belarus came increasingly important country. Central Asia gas deposit could restrict Russian ability to compete in world markets with rapidly increased rates of demand for fossil fuels. According to Steven Bank, “Given the centrality of oil and gas to Russia’s economy that would be a catastrophe”⁸⁹ Central Asia’s natural gas situation is specific because of the location and size of natural gas deposits, the current need for pipelines, and the much larger ownership role of Russia.⁹⁰ See map 3.1



Sources: Gazprom

Map 3.1 Russian gas pipelines in Central Asia

⁸⁸ Jonathan P. Stern, “The future Russian gas and Gazprom”, U.K. 2005, p.66

⁸⁹ Stephen Bank, “Russo-Chinese energy relations: politics in command” U.K. 2006, p. 23

⁹⁰ Dina Spechler and Spechler Martin, *Central Asia. Trade, energy, and security in the Central Asian arena*, Seattle: National Bureau of Asia Research, 2006, p. 218.

Russia's interest in Central Asia is to large extent explained by the fact that the extraction of hydrocarbons in the conditions of the region is technically simpler and economically more advantageous than in the north of Russia where the overwhelming majority of Russian oil and gas fields are concentrated. Russia is striving to drag as large a part as possible of the hydrocarbon resources of Central Asia into its own fuel-energy balances in order to support internal consumption, without simultaneously lowering the volumes of its own hydrocarbon exports to external markets, first and foremost to Europe.⁹¹

3.1 Turkmenistan

During the Soviet era Turkmenistan provided significant quantities of gas to Russia and other republics. After the break-up of Soviet Union, Turkmenistan demanded payment for its gas from all former republics, including Russia, in hard currency at *world prices*. A series of disputes ensued over non-payment and non-delivery of gas between Turkmenistan and the former Soviet republics.⁹²

Turkmenistan is Central Asia's biggest player with proven reserves of 3 trillion cubic meters, and production of 54.6 billion cubic meters (bcm), of which 38.6 bcm were exported in 2004, mostly to Russia through Soviet-era pipelines crossing Kazakhstan⁹³. In Turkmenistan, Russia cut off Turkmen gas exports to Europe and tried to cut itself in on any future pipeline construction. Russia also apparently bought Turkmenistan's gas supply at low prices and resold it to Turkey at a 300 percent markup⁹⁴.

⁹¹ Dr Vladimir Paramonov and Dr Aleksey Stokov The Defense Academy is the United Kingdom "Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008, p. 6, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf) access July 15 2010

⁹² Ibid.

⁹³ Dina Spechler and Spechler Martin, *Central Asia. Trade, energy, and security in the Central Asian arena*, Seattle: National Bureau of Asia Research, 2006, p 218.

⁹⁴ Stephen Blank, The Strategic Studies Institute is the U.S. Army "Energy, Economics, and Security in Central Asia: Russia and Its Rivals", USA 1995 p.19 <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub119.pdf>, access July 15 2011.

At present, such companies as Gazprom and the ITERA⁹⁵ International Group of Companies are working in Turkmenistan. Project and investment activity of Russia and Russian companies in the oil and gas sectors of Turkmenistan is still extremely low. It encompasses only the gas transportation area and the volume of Russian investments at the end of 2007 was just in the region of 25 million U. S. dollars⁹⁶. These investments were directed towards the supply from Russia of technical equipment for the gas sector of Turkmenistan, the renovation and modernization of gas pipelines, compression and distribution stations, etc.⁹⁷

On the other hand, considering the significant hydrocarbon and, above all, the gas reserves of Turkmenistan, one can with great certainty assume that in the near future the investment activity of Russian companies will increase dramatically. Up to and including 2012, Gazprom alone plans to invest not less than 2 billion dollars in the gas sector of Turkmenistan. Furthermore, it is most likely that other Russian or joint companies can be expected to appear in Turkmenistan, in the first instance Lukoil and TNK–BP.

Turkmenistan's ability to exploit and export its natural gas is constrained by its geography and export options, primarily the routes and the capacity of those systems. There exist two export routes for Turkmen gas: northwards to Russia and to Iran to the south. Of these two routes, the overwhelming majority of export infrastructure is focused towards Russia, a legacy of the Soviet Union's integrated pipeline network.

The export of natural gas generates up to 85⁹⁸ percent of Turkmenistan's annual revenue. Turkmen gas is also essential for Russia. Exports from Turkmenistan provide energy to major portions of southern Russia, thus allowing Moscow to meet its income generating export demands in Eastern Europe. In addition, as the yields decrease in Russia's main gas fields and production sags due to a combination of aging

⁹⁵ Jonathan P. Stern, "The future Russian gas and Gazprom", U.K. 2005, p.72

⁹⁶ Ibid.

⁹⁷ Dr Vladimir Paramonov and Dr Aleksey Stokov The Defense Academy is the United Kingdom

"Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008, p.

6, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf) access July 2010

⁹⁸ Central Asia-Caucasus Institute Analyst, <http://www.cacianalyst.org/?q=node/4378/print>, access July 2011

infrastructure and a lack of upstream investment, Turkmen gas allows Gazprom to meet mounting European energy demands.

Russia is the source of nearly half⁹⁹ of Europe's total gas imports (varying by country), and according to the Economist - European demand is set to double in the next 30¹⁰⁰ years. Gazprom's ability to meet those demands is a result of continued access to Turkmen gas. With gas the prime income earner, both the new Turkmen government and Russia are extremely dependent on the continued flow of gas exports. For the Berdymukhammedov administration, access to export revenues will allow the patronage systems put in place by Niyazov to continue, thereby maintaining the status quo among the various competing interests at work in the country

In the immediate short term, we can expect there to be no changes in Turkmenistan's policy of gas exports. Rather, while the situation remains fluid in Ashgabat, and until presidential elections are held in early February, the interim Berdymukhammedov government will draw closer to Russia. This is simply the result of the fact that Moscow is best positioned to both influence and provide much needed stability to the new government. Moreover, Russia is the only viable export route for Turkmen gas, a fact well-known in both Moscow and Ashgabat.

One of Berdymukhammedov's first statements was that oil and gas exports would continue uninterrupted throughout Turkmenistan's transition, and thus far this appears to have occurred. Early indications suggest that the acting president and his backers in the security services of the *ancient régime* will likely win the February elections, thereby formalizing the transfer of power, and perpetuating the Niyazovist system. As a result, it is likely that a pro-Moscow gas export policy evolves in the short term, continuing to enrich the Turkmen nomenclature and advance Gazprom's profits and acquisitions.

⁹⁹Heritage Foundation, <http://www.heritage.org/research/reports/2007/11/europes-strategic-dependence-on-russian-energy> , access July 15 2011.

¹⁰⁰ Central Asia-Caucasus Institute Analyst, <http://www.cacianalyst.org/?q=node/4378/print>, access July 15 2011.

Main priority for Russia is relationship with Turkmenistan is still continuing. In 2003 Russia obtained the option to buy all Turkmen gas for next 25 years. However prices were to be negotiated each year, which inevitably led to much hard bargaining. “Moscow refused to give up when gas deliveries were stopped in the winter of 2004-2005, and showed considerable flexibility when seeking to secure Turkmenistan’s support in the gas conflict with Ukraine in 2006”¹⁰¹. When new president Berdymukhammedov understood that Western proposals to cooperate are unreal, he decided to sign deal with Gazprom (this same agreement was signed also by Uzbekistan and Kazakhstan) in 2009 which granted an increase gas import from 50 to 90 bcm¹⁰² and allowed to modernize The Khiva – Aleksandrov Gay pipeline and constructing Pri – Caspian pipeline.

3.2 Kazakhstan

Though having comparable proven reserves—nearly 2, 4 trillion bcm, one of the fourteen greatest in the world—Kazakhstan has had limited production. In 2009 the country produced only 35, 61 bcm, of which about 50% was used domestically, leaving only 17.66 bcm for export¹⁰³. Kazakhstan’s gas pipelines are mostly in the west and south of the country. Gas exports from Kazakhstan to Russia use the Central Asia-Center pipeline, which also carries gas from both Turkmenistan and Uzbekistan.

Russian gas trade with Kazakhstan, even during the Soviet period, never involved large volumes. However, the exchanges between the countries were logistically useful because of the location of Kazakh gas fields far from centers of population. For the same reason as in Turkmenistan case, the collapsed of the Union quickly saw the trade reduced to negligible levels. Kazakhstan is important to world energy markets because it has big oil and natural gas reserves. The existence of Soviet era pipeline system which links Russia and Kazakhstan has meant that “Russia has had

¹⁰¹ Morten Anker, Baev Pavel, Brunstad Bjorn, Overland Indra and Torjesen Stin, *The Caspian Sea Region Towards 2025*, The Netherlands, Amsterdam: EburonNederland, 2010, p.79.

¹⁰² Ibid. p 77.

¹⁰³ Central Intelligence Agency, *The World Factbook* <https://www.cia.gov/library/publications/the-world-factbook/geos/kz.html> (estimate of January 1, 2009), access July 15 2010.

and is likely to retain a strong influence over the transport of Kazakh oil and gas wealth to markets further afield"¹⁰⁴

After years of foreign investment into the country's oil and natural gas sectors, the landlocked Central Asian state has recently begun to realize its enormous production potential. Main oil Gas Company in Kazakhstan is KazMunNaiGas¹⁰⁵, which belongs to the state. Kazakhstan could become a major world energy producer and exporter over the next decade. Main destination for Kazakhstan gas is Russia and Ukraine. At the end of 2009 to importers of Kazakhstan gas has joined China.

Kazakhstan exports most of its gas volumes to Russia through KazRosGaz which at present has a *de facto* monopoly on gas exports from Kazakhstan.¹⁰⁶ KazRosGaz is a joint venture between Gazprom (50%) and KaZmuNaiGaz (50%). Due to pipeline configurations, Kazakhstan exports much of its own gas production to Russia. At the same time, several regions depend on imported gas. Most imported gas goes to the southern network, which remains almost completely independent from imports via Uzbekistan¹⁰⁷.

Russian companies such as Lukoil, Gazprom and Rosneft are active in Kazakhstan at the present time. At the end of 2007, total Russian investments in the oil and gas sectors of Kazakhstan amounted to an estimated 3.4 to 4.1 billion dollars. By the end of 2012, Russia plans to invest an additional sum of between 6.7 and 7.5 billion dollars. It is suggested that this will be mainly invested in geological survey projects and the opening of promising oil and gas fields as well as in the development of the pipeline system.¹⁰⁸

¹⁰⁴ Archie Brown, *Contemporary Russian politics*, Oxford: Oxford University Press, 2001 p.448.

¹⁰⁵ КазМунайГаз http://www.kmg.kz/page.php?page_id=1009&lang=2, access July 15 2010.

¹⁰⁶ The Oxford Institute for Energy Studies, <http://www.oxfordenergy.org/pdfs/NG25.pdf> access July 15 2010.

¹⁰⁷ Terterov, Marat, *Kazakhstan's Dynamic Economy: A Business and Investment Review*, London : GMB Publishing Ltd, 2006, 2006 p. 24

¹⁰⁸ Dr Vladimir Paramonov and Dr Aleksey Stokov The Defense Academy is the United Kingdom

"Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008,

[http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf) access July 15 2010.

On 3 October 2006, Kazakhstan and Russia agreed to form a joint venture between state-owned KazMunaiGas (KMG) and Gazprom. It will own the Orenburg gas processing plant in southern Russia and build new pipelines to it, enabling at least 15 Bcm¹⁰⁹ per year of gas, mostly from Karachaganak, to be processed, with 7 bcm pump back to Kazakhstan and the rest exported through the Gazprom system. Karachaganak's gas production is projected by its consortium to grow to 25 bcm by 2012. Gas consumption is rising but with the expected growth in production, Kazakhstan will be an important natural gas exporter by the end of the decade.

Kazakhstan was a net importer until 2004, when foreign investment started to raise production gradually, to an estimated 25.7 Bcm in 2006¹¹⁰. The slow growth is caused by the lack of transport infrastructure. The country's most populous southern region is not connected to the western fields and relies on imports. This is a legacy of the Soviet system, which created links based on proximity and Soviet-defined needs, not internal borders.

Kazakhstan's gas is often more difficult to extract than that of neighboring countries, as much of it is associated. *Flaring* refers to the burning off of gases in an *associated* oil field. *Reinjection* refers to the re-introduction of released gases into an underground oil reservoir to maintain pressure and ensure a higher oil recovery rate"¹¹¹. The government has put force on companies to reduce flaring, at times even at the cost of production.

3.3 Uzbekistan

Uzbekistan was, after Russia, by far the largest gas producer in CIS countries during 1990s after Turkmen production began to decline. Uzbekistan is unusual within the CIS in having a very substantial gas market but a relative lack of trade. It exported

¹⁰⁹ International Crisis Group "Central Asia's energy risks", 2007, http://www.crisisgroup.org/~media/Files/asia/centralasia/133_central_asia_s_energy_risks.ashx, access July15 2010.

¹¹⁰ Ibid.

¹¹¹ Ibid.

around 3 Bcm in 2002 and this more than doubled to 6, 2 bcm the following year¹¹². In 2000s Uzbekistan has become much more engaged outside Central Asia, although Gazprom remains its main partner.

The gas sector is mismanaged and worsening. The transport and distribution system began breaking down in the late 1990s, and an estimated 20 Bcm per year was lost. Since then it has received little investment. Recently the government began charging for domestic gas flows in order to increase exports. The estimate of 35 Bcm per year of gas production is far below conventional estimates based on official statistics of 57-60 bcm but adequately takes into account this worsening¹¹³.

At present Russian companies such as Gazprom and Lukoil are active in Uzbekistan. At the end of 2007, Russian investments in the oil and gas sectors of Uzbekistan amounted to between 520 and 1 billion dollars¹¹⁴. By 2012, Russia plans to invest a suggested 4, 7 to 6, 2 billion US dollars¹¹⁵ into the oil and gas sectors of Uzbekistan. These resources are to be put into geological study and opening of oil and gas fields projects as well as into the upgrading of pipeline infrastructure

Gazprom is the largest investor, its stake apparently tied to import deals and development of transport infrastructure; it is also the largest importer of the gas. Foreign investment may one day slightly increase Uzbekistan's diminishing output, but it will be a major task just to make up for the existing decline rate and repair transport infrastructure. Uzbekistan will continue to transit far more of Turkmenistan's gas than its own in the Central Asia Centre (CAC) pipeline to Russia.

¹¹² Jonathan P. Stern, "The Future of Russian Gas and Gazprom", U.K. 2005, p. 81

¹¹³ International *Crisis Group* "Central Asia's energy risks", 2007,

http://www.crisisgroup.org/~media/Files/asia/centralasia/133_central_asia_s_energy_risks.ashx , access July 2010.

¹¹⁴ Gazeta Wyporczy, <http://gospodarka.gazeta.pl/gospodarka/1,34581,5011662.html> ,access July 15 2010

¹¹⁵ Dr Vladimir Paramonov and Dr Aleksey Stokov The Defense Academy is the United Kingdom

"Structural interdependence of Russia & Central Asia in the oil and gas sectors", 2008, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf) access July 15 2010.

3.4. Gas Market Prices and Assessment of CAS policy

Russia (Gazprom) brings annually 40 billion cubic meters of raw material from Turkmenistan, 9 billion cubic meters - from Uzbekistan and 8 billion cubic meters - from Kazakhstan¹¹⁶. For now, it is not clear if the price of gas will increase in Central Asia. This is because gas contracts are under very strictly confidential policy.

In 2007 gas from Kazakhstan was selling by 145 USD per 1,000 cubic meters, and then sold in Europe at Gazprom-determined “market” prices averaging \$250 and over¹¹⁷. In 2008 the Russian company bought it at an average of 180 USD per 1000 cubic meters¹¹⁸. In recent years, Kazakhstan, Uzbekistan and Turkmenistan sold gas at prices lower than the average in Europe. Since 2009 price could increase by 60-70 percent from January 2009 to up to 306 USD per 1000 cubic meters¹¹⁹

Gazprom used few different gas prices. The lowest prices on the Russian market, forced by administrative authorities, is approximately 30 - 40 USD per 1000 cubic meters¹²⁰. Russia is planning to increase domestic price to 100 USD per 1000 cubic meters in 2011¹²¹. Price for former Soviet republics is around 100-230 USD per 1000 cubic meters. It depends on political issue between Russia and another states. See table 3.1 After collapse of the Soviet Union, many of the economic relations had to be continued. Kazakhstan, a former Soviet republic extremely dependent on Russian gas, has not been able to pay market prices for fuel.

¹¹⁶Gazeta Wyporczy, <http://gospodarka.gazeta.pl/gospodarka/1,33181,5011662.html>, access July 15 2010.

¹¹⁷ Jamestown Foundation [http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32749](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32749), access July 15 2010.

¹¹⁸ Reuters, <http://uk.reuters.com/article/oilRpt/idUKL1840067520080318>, access July 15 2010.

¹¹⁹Ibid.

¹²⁰ Polityka, <http://www.polityka.pl/krotki-kurs-gazownictwa/Lead33,1091,279283,18/>, access July 15 2011.

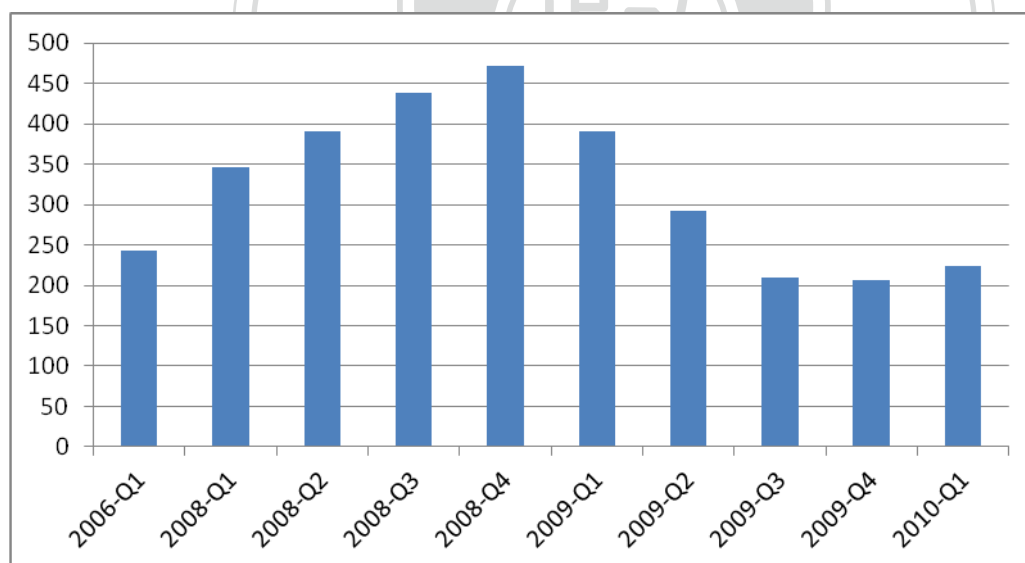
¹²¹ Polit.ru, <http://www.polit.ru/news/2006/11/28/gaz.html>, access July 15 2010.

Table 3.1 Russian gas sales prices in 2008. USD per 1000 cubic meters

| | | |
|--------------|----|--------|
| Lithuania | \$ | 280.00 |
| Latvia | \$ | 280.00 |
| Estonia | \$ | 280.00 |
| Georgia | \$ | 230.00 |
| Moldova | \$ | 191.25 |
| Ukraine | \$ | 179.50 |
| Belarus (Q1) | \$ | 119.00 |
| Armenia | \$ | 110.00 |

Sources: U.S. Energy Information Administration

The European prices is variable - in the so-called contract is determined. Pricing formula, which is a special mathematical model, which substitutes a number of sizes, including the trading price of oil. Is around 450 USD per 1000 cubic meters¹²². Today Russia providing 50 % of European gas demand¹²³. The best time for Gazprom was 2008 – higher price was 472 USD per 1000 cm¹²⁴.



Sources: East European Gas Analysis

Figure 3.1 Average Russian price for gas exporting to Europe

¹²² Polityka, <http://www.polityka.pl/krotki-kurs-gazownictwa/Lead33,1091,279283,18//>, access July 15 2011.

¹²³ *EU-Russia energy relations: the need for active engagement*. EPC Issue Paper No. 45, <http://www.epc.eu/>, access July 15 2011.

¹²⁴ <http://www.eegas.com/ukr-eur-2009-price.htm>, access July 15 2011.

Central Asian exporting countries – Turkmenistan, Kazakhstan and Uzbekistan – which are becoming increasingly important sources of gas supply for the CIS countries including Russia. Kazakhstan and Uzbekistan are also transit countries, as is Russia itself. The politics of the gas relationships between Russia and Central Asian countries are very important to both the Putin administration and other national governments.

Russian makes diplomatic and economic pressure in Central Asia to buy cheap gas while at the same time protecting Gazprom's dominant gas market position in Europe from competition from Central Asian gas. Russia and Gazprom, as the suppliers of 50%¹²⁵ of Europe's imported gas, have sought to exclude other Central Asia gas supplies from European markets or at least to ensure that any gas flows to the West through Russia and Gazprom's system. Hence, the United States has worked diplomatically to support commercially questionable alternative gas pipelines, such as the Nabucco project, that would supply gas to Europe from Azerbaijan, Turkmenistan, and possibly Iraq, while bypassing Russia.

Gazprom had a near-monopsony from 2007 to 2009, and most likely beyond, for Central Asian gas exports, all of which in the near future will go through it, except for a small amount to Iran and small amounts to the other two Central Asian republics. A monopsony is the reverse of a monopoly¹²⁶. There are many sellers, but only one buyer. Generally, a monopsony results in a loss in economic efficiency, as just one buyer has market power to affect the price by varying the quantity bought. The result is output and prices are less than they would be under competitive conditions, which to a degree is what has occurred in Central Asia.

There are simply are no alternative agreements at this time. Russia is a very large consumer of gas itself – the world's largest after the U.S. It subsidizes domestic prices, which inevitably increases consumption. Given that consumption, which is

¹²⁵ The National Bureau of Asian Research, http://www.nbr.org/publications/specialreport/pdf/preview/SR23_preview.pdf, access July 15 2011.

¹²⁶ The Economist, <http://www.economist.com/research/Economics/alphabetical.cfm?letter=M#monopsony>, access July 15 2011.

expected to grow, and domestic production, which will not keep pace, Russia will continue to rely on Central Asia to maintain export levels to Europe.

Russia has been trying to create an alliance of Eurasian gas producers to “bring an element of stability to long term of transportation gas called Central Asian OPEC”¹²⁷ Putin’s Administration has developed a regional strategy for Central Asia that would integrate Russian political and economical interests. Natural gas strategy seems to have been particularly well and efficiently carried out by Gazprom.

About 92 percent of Central Asia’s gas goes through Russia, most via the CAC pipeline. Built in the early 1970s, it has two branches and feeds directly into Gazprom’s system. Kazakhstan can send gas to Gazprom only from its western region northward. In May 2006, a deal was reportedly reached on price: \$140 per 1,000 cubic meters¹²⁸. Additional pipelines to the Orenburg processing plant are in the works to expand exports. Also under consideration are pipelines to China and a trans-Caspian one to avoid the Gazprom system. Mere consideration of these options gives negotiating leverage with Russia.

Russia’s predominant influence in the region is unlikely to be challenged forcefully by any outside power¹²⁹. While instability within each of these authoritarian regimes could result in violence, outside powers besides Russia are unlikely to step in to restore order.

¹²⁷ Johnson's Russia List “Securing Moscow's southern flank” <http://www.cdi.org/russia/johnson/6376-3.cfm> access July 15 2011.

¹²⁸ International Crisis Group "Central Asia’s energy risks", 2007, http://www.crisisgroup.org/~media/Files/asia/centralasia/133_central_asia_s_energy_risks.ashx , access July 15 2010.

¹²⁹ Dina Spechler and Martin Spechler, *Central Asia. Trade, energy, and security in the Central Asian arena*, Seattle: National Bureau of Asia Research, 2006, p. 204.

Chapter 4 New Players

This chapter discusses issues faced by China, Iran, Europe and USA with regard to natural gas resources. It focuses mostly on China which is the new sponsor of Central Asia. Chinese investment gives Central Asian states new chance to sell their assets. In this chapter are also mentioned other competitors for natural gas in Central Asia, such as European Union, USA and Iran.

4.1. China

China is one of the most active "players" in Central Asia. Because the great powers are present in this region, each state is becoming an object of this increasing rivalry. This competition could be significant chance for this region, but also could become a source of trouble. Central Asia has long been an object of China's imperial interest, though effective control mostly eluded the Chinese. Today, China does not want to see a volatile situation in Central Asia, for a stable wider Asia-Pacific is vital for carrying out its economic modernization goals.

China is Russia's likeliest and strongest future competitor in Central Asia. This is not by default. China, as Russian and Western observers understand, has many important advantages in the contest. The reference scenario projections imply a persistently high level of spending on oil and gas imports by almost all importing countries. China overtakes the USA soon after 2025¹³⁰, to become the world's biggest spender on oil and gas imports, while India surpasses Japan soon after 2020 to take third place¹³¹. Demand for natural gas and oil has been increasing rapidly. See graph 4.1 . Oil and gas account for a small portion of the total energy supply in China – 22,

¹³⁰ Hasan Karrar, *The new Silk Road diplomacy. China's Central Asian foreign policy since the Cold War*, Vancouver, B.C. : UBC Press, 2009, p. 173.

¹³¹ International Energy Agency, World Energy Outlook 2009 Fact Sheet, <http://www.worldenergyoutlook.org/UK>, access July 15 2011.

6 %¹³². This energy demand and supply is strictly connected with rest of the world. There is no doubt that China is very much concerned about its energy future.

Since 1994¹³³ China has become a net importer of energy. China has already become the fourth biggest natural gas-consuming nation after the United States, Russia, and Iran. In terms of natural gas, in foreseeable future gas production will increase “by nearly 10 % and the share of natural in energy consumption will increase by also 10% - implying rising dependence of imports”¹³⁴ A noticeable change will take place in Chinese natural gas consumption structure, with the high-end market still lying in the economically developed eastern regions, while the rapid surging gas consumption is taking place in central and western regions. Gas consumption in residential sector will keep growing while that in industrial sector and power generation will also witness a large-scale increase.

The next 10 to 20 years shall be the critical time for Chinese social and economic transformation, and welfare society building. Facing the robust energy demand, driven by steady and continuous economic development, and the enormous environmental pressure brought by the primary energy structure dominated by coal with 70% share¹³⁵, the Chinese government has put forward a series of policies including reasonable controls on total energy consumption, promotion of energy efficiency, improvements in energy innovation, adoption of low-carbon and clean energy pathway. Accelerating natural gas development is one important component of this strategy, which provides an encouraging atmosphere for further gas development in China.

In this decade, China’s gas industry will also face numerous challenges, including challenges of technological innovation raised by the relatively inferior domestic gas reserves; challenges of supply security raised by rapidly booming consumption; challenges of investment returns brought by large scale investments; challenges of gas

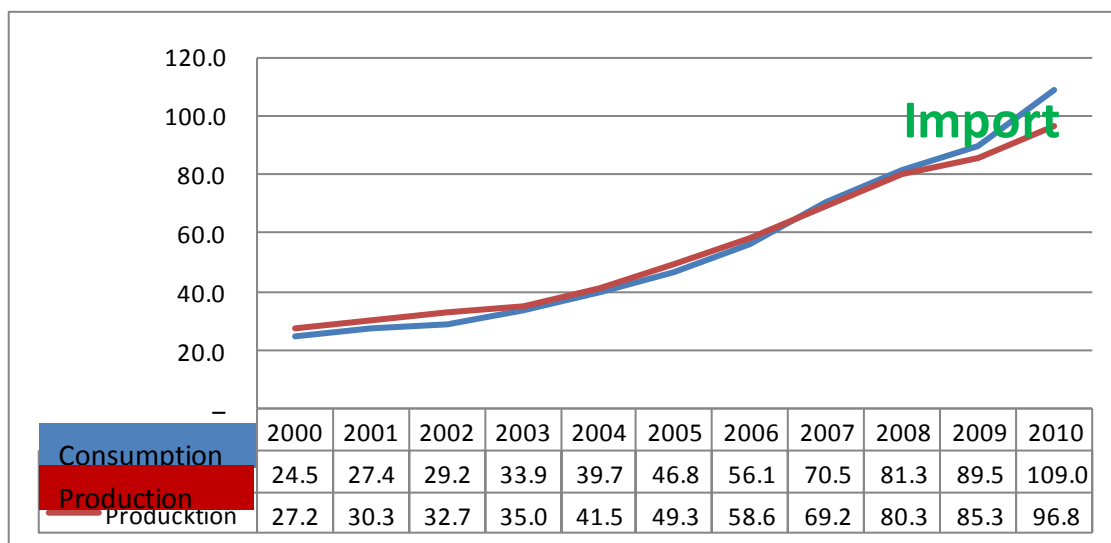
¹³² Michael Wesley, *Energy security in Asia*, New York : Routledge, p.51.

¹³³ Richard, Autyand, Indra Soysa , *Energy, wealth and governance in the Caucasus and Central Asia*, New York : Routledge, 2006, p.231.

¹³⁴ Hasan Ebel *China’s Energy Future*, Washington, D.C. : The CSIS Press Center 2005, p. 32.

¹³⁵ The National Bureau of Asian Research, *Natural Gas Development in China: Status and Prospects*
http://www.nbr.org/downloads/pdfs/ETA/PES_2011_Xu_Yongfa_Speech_Translation.pdf, access July 15 2011.

pricing mechanism due to different affordability and gas price differentials between domestic and foreign gas sources¹³⁶.



Sources Statistical Review of World Energy 2010, British Petroleum

Graph 4.1 Gas consumption and production in China (Bcm)

China, moving gradually toward a leading position in the struggle for influence in the post-Soviet era, has similar geographical advantages. It has far fewer limitations than its Middle Eastern rivals. A regulated economy, which is more compatible with the economies of the Central Asian republics, a secular state, and available financial means are also on the plus side. China offers the Central Asian states the use of its territory to gain direct access to the Pacific and on to the Far East and Southeast Asia.

China is, in many ways, stronger than Russia. Furthermore, Russia now needs Chinese help to enter East and Southeast Asia. More importantly, China has a mature, well-conceived strategic concept that addresses its interests and goals in Central Asia. Not surprisingly, its concept also connects the questions of trade routes, transportation networks, Islam, and energy.

Since China's energy consumption and demand are expected to grow sharply, stability in Central Asia is vital for China's continued economic growth and

¹³⁶ The National Bureau of Asian Research, Natural Gas Development in China: Status and Prospects http://www.nbr.org/downloads/pdfs/ETA/PES_2011_Xu_Yongfa_Speech_Translation.pdf, access July 15 2011.

modernization. Otherwise, China's ability to sustain its political posture and economic growth will come into question. Projects to link Turkmen and Kazakh energy deposits to pipelines running through China rather than Russia are being encouraged.

China has gradually advanced its ambitions to hold of Turkmen gas resources. While Russia courted Berdymukhammedov persistently, he was keen to deliver on the vague promises to China made by his predecessor in order to expand his space to maneuver.

Later the agreement was expanded to 40-45 bcm. CNPC was able to secure this landmark deal due to generous “cheque book diplomacy”¹³⁷ that involved grants and “soft loans” of various kinds, including new uniform for Turkmen Army¹³⁸. When Gazprom’s projects to build its pipeline became stuck in their first phase of realization, China didn’t waste time, and even facing world financial crisis, quickly completed its first part, which runs from Chinese Eastern coast to Turkmen fields.

China is altogether a more substantial partner than any other potential Russian rival. And Chinese interests are unable to coexist with reformers and religious fundamentalists in power. For Kazakhstan and Uzbekistan, it will be necessary to play off Moscow against Beijing to avert extreme dependence on either one. Nevertheless, both Russia and China must find their respective positions in Central Asia's economy.

Russia's attraction is based on existing infrastructure and past ties, and will likely siphon resources out of the area without materially helping to develop it. China's attraction is based on a self-sustaining dynamism that sees it to its advantage to develop Central Asia and truly integrate it into China's economic orbit. Although China and Russia are now allies, a long-term distancing and even mutual rivalry in Central Asia is likely and more probable since only China has the local means and ability, and perhaps the will to challenge Russian regional interests. Certainly China

¹³⁷ Morten Anker, Baev Pavel, Brunstad Bjorn, Overland Indra and Torjesen Stin, *The Caspian Sea Region Towards 2025*, The Netherlands, Amsterdam: EburonNederland, 2010, p.74.

¹³⁸ Ibid.

sees itself as only now beginning to play its rightful role in world affairs due to its wealth, power, and status. That feeling can only grow as those attributes increase and they could easily lead to a clash of vital interests in Central Asia.

4.2. EU and USA

The European Union (EU) wants to establish a commercial energy relationship with Central Asia. Making this strategic objective a reality is a complex and challenging undertaking. Although the prize is considerable given the region's abundant reserves of oil and gas (not to mention uranium, which could be used to service the next generation of European nuclear reactors), the constraints are equally daunting.

The principle underpinning the EU's energy outreach towards Central Asia is based on self-interest and focused on gas. The objective is to diversify supplies in order to reduce the dependence of EU member states on gas supplies from Russia, the potential volatility of which has been demonstrated by supply disruptions to core transit/customer states, notably Ukraine, Belarus, Moldova and Georgia since 2006¹. These have followed disputes over pricing, payment and unregulated offtake. Yet, it is by no means certain that Central Asia is the answer to the EU's wider diversification strategy. A number of alternatives that exclude Central Asia altogether have gained currency in policy-making circles for a variety of reasons. New supply routes from Russia that bypass "problem" transit states reductions in long-term EU gas demand through greater energy efficiency.

Already high and rising European energy demand will, especially with the eventual decline of North Sea resources¹³⁹, further increase the importance of the already significant energy imports from Russia and the Middle East. Europe currently imports

¹³⁹Svante Cornell and Niklas Nilsson, *Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives*, Washington D.C.: CACI-SRSP, 2007, p. 10.

over half of its natural gas from Russia, while several East European states are almost completely dependent on Russia for their gas supply. The serious aspects of European dependence on Russian energy became especially obvious during the Ukrainian gas crisis in 2006, and have been subsequently repeating by “Russian energy diplomacy every year against Belarus, Georgia, Ukraine and Lithuania”¹⁴⁰.

Especially for gas, Russian resources are unlikely to fill future European demand due to lack of domestic investment in the new energy projects and infrastructure. In this situation, the considerable oil and gas resources in the Central Asian region constitute the most accessible alternative energy supplies for Europe. From the standpoint of European energy security (especially in case of Eastern Europe) it is more than important to build natural gas infrastructure from CAS, bypassing the Russia.

As far as gas is concerned, Turkmenistan alone produced 90 bcm per year in the late Soviet era¹⁴¹, a substantial amount compared to Gazprom’s exports to Europe, which at present are in the order of 150 bcm. Turkmenistan’s present output stands at 70 bcm, but major investments in the country appeared much more likely in 2007 than even a year earlier, given the reforms undertaken by the new leadership under Gurbanguly Berdymuhamedov¹⁴².

Europe could directly engage the new Turkmen leadership to a higher degree. The EU has not given up hopes of getting a share of Turkmenistan’s allegedly vast gas resources and setting a new import route with Trans-Caspian Pipeline. Berdymukhamedov keeps these hopes alive by signaling his interest, but has refused to commit itself to the projects that Moscow has designated as “hostile”¹⁴³

¹⁴⁰Francois Godement, Nicolas Francoize, Yakushiji Taizo , *Asia and Europe. Cooperating for Energy security*, Paris: Institute francais des relations internationales , France 2004, p.101.

¹⁴¹ Svante E. Cornell ,The International Relations and Security Network (ISN) ,“Trans-Caspian Pipelines and Europe’s Energy Security” <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=110773>, access July 15 2011.

¹⁴² Ibid.

¹⁴³ Morten Anker, Baev Pavel, Brunstad Bjorn , Overland Indra and Torjesen Stin , *The Caspian Sea Region Towards 2025*, The Netherlands, Asmsterdam: EburonNederland, 2010, p. 74.

It is therefore a near-certainty that gas from Azerbaijan, Turkmenistan, and Kazakhstan will be reaching Europe in increasing quantities in the following decades, a process that has already begun for oil. The question is through which export routes these resources will be transported to Europe. That new pipeline capacity is needed is obvious, and this gas can reach Europe in various ways. It can be transported independently and directly from producer states through a varied set of routes to European markets, increasing Europe's energy security by diversifying its supply routes. This, of course, requires the building of new transportation networks.

The EU and its member states can do several things for energy development in the region, and by extension for itself. The first would be to strongly support the Nabucco project, understanding that this commercial project is dependent on political support and cannot be left to market forces alone. This is because all main competitors are politically supported and not market-oriented, and energy issues as such are of political nature. It is clear that when dealing with the region, Europe would be well advised to realize that it is in no position to put conditions on energy, or other relationships.

Central Asian states are not devoid of options. Essential is the willingness of Kazakhstan and Turkmenistan to commit their energy for export to Europe. In this regard, Kazakhstan is pursuing an export strategy based on multiple routes. Especially, as output from the Kashagan field rises, Kazakhstan needs to find new routes for its oil exports. This can be done through three options: expanding the existing Caspian Pipeline Consortium pipeline (CPC) running through Russia to the Black Sea coast, feeding additional oil into the BTC pipeline, and exporting oil eastward to China through a new pipeline. Kazakhstan will thus be in a position where it can adjust its export between these three channels, thus gaining greater sovereignty and room for maneuver.

As far as Central Asia is concerned, Both Russia and China are in a more advantageous political and geographical position than Europe. Indeed, should Europe

not move rapidly to devise a coherent policy and to increase its engagement with the region, the energy resources of Central Asia are likely to reach Chinese and not European consumers.

Energy security remains a significant part of American policy towards Russia and Central Asia. “Here has been observed that a truce has also been declared in the *battle of the pipelines*.¹⁴⁴ U.S. (and global) energy security is fundamentally enhanced by the maximum development of new oil and gas supplies in Eurasia and the development of a highly diversified regional pipeline infrastructure to transport that oil and gas to booming Asian markets.

Natural gas markets are by their nature more regionalized, but the principle remains the same: more supplies and varied pipeline routes across regions enhance the flexibility of gas markets, strengthen supply security, and reduce price volatility for all those reliant on cross-border gas flows. The phenomenal growth of liquefied natural gas (LNG) markets over the past two decades adds to that flexibility and improved supply security. Hence, in the cases on which the conference focused, the United States has largely pursued its fundamental energy security interest in supporting the successful development of new oil and gas pipelines from Russia to East Asia, new pipelines from Central Asia to Asia, new gas pipelines to meet India’s rising energy needs, and oil and gas pipelines to supply China’s booming demand.

United States has significant energy security and strategic interests at stake in the geography of pipeline development in Eurasia that overlay and, in some cases, reshape how Washington pursues its energy security goals. While the United States has a basic interest in promoting the flow of Eurasian oil and gas to Europe and Asia, it has also actively sought to influence the geography of pipeline routes from Central Asia in order to limit Russia’s control over European oil and gas markets as well as over the scale and direction of oil and gas supplies from Central Asia¹⁴⁵.

¹⁴⁴ Anita Sengupta, *Russia, China and multilateralism in Central Asia*, India: Shipra, 2005, p.118.

¹⁴⁵ The National Bureau of Asian Research, http://www.nbr.org/publications/specialreport/pdf/preview/SR23_preview.pdf, access July 15 2011

The American intervention in Afghanistan and Iraq put the Central Asia on the global strategy map and raised tensions in this region. A governing principle of U.S. policy has been its determination, as part of the broader policy of dual containment of Iran, to obstruct Central Asia's rapprochement with Iran. Geo- strategic and geo-economic priorities for USA is developing east-west energy and transportation process (Trans Caspian project), restrain Iran “and promoting American business interest and strategic plans”¹⁴⁶

U.S. attitude toward Iran is a bit different than European approach. Europe doesn't perceive Iran as a big threat for world stability. Relations between Europe and Iran are much more friendly than those between Iran and the U.S.. To decrease the cost of planning gas infrastructure from CAS that would bypass Russia it would be more reasonable to build pipeline on the ground rather than under the Caspian Sea. The only possible way to do it is to locate construction on the territory of Iran. Vehement opposition against this idea from American side renders this plan unreal. This difference of opinions between Europe and USA is not regarded as an open conflict, but in reality it is a problem for European side.

4.3. Iran

Iran is essentially concerned with fostering relations with Muslim republics in Central Asia¹⁴⁷. Iran can help by providing alternative routes for energy and foreign trade. For these landlocked states it is a big chance to expand the existing transport routes across Iran to Gulf coast.

¹⁴⁶ Gabriela Rasuly, and Julia Katyschnig, *Central Asia on display*, Wien: Lit ,Austria, 2004, p.457

¹⁴⁷ Mohiaddin Mesbahi, *Central Asia and the Caucasus after the Soviet Union* , Gainesville : University Press of Florida, 1994, p.253.

Iran is the world's second¹⁴⁸ largest owner of proven natural gas reserves. Since the disintegration of Soviet Union, Iran has become an important actor vying for the control of the energy resources in Central Asia. Because of its natural resources, its strategic location, Iran inevitably plays an important role in the region, and even in the global scale. It is a natural transit link and shortest route between the Central Asia, Caspian Sea states and Europe.

The government of the Islamic Republic of Iran looked at the independence of Turkmenistan as creating new opportunities for its own gas industry. Like the Russians, the Iranians believed that the potential synergies between their country and Turkmenistan could help promote the expansion of their role as a global gas provider. The construction of a pipeline linking the Krichch (Korpedzhe) gas deposit in western Turkmenistan to Kert-Kui in northern Iran was intended to be the first step in creating a long-lasting energy partnership between the two countries.

Iranian officials viewed the collapse of the Soviet Union as an opportunity for strong geopolitical realignments in the region, and they worked hard to ensure that Tehran would be at the center of them¹⁴⁹. They recognized that Turkey had competing views of what these geopolitical alignments might entail, but Iranian officials believed that Turkmenistan's gas created an opportunity for the two countries to work in concert.

In spite of this potential for cooperation, it has to be noted that Iran is in no way a dominant player in the region. Political international isolation, inspired by the USA, is the biggest obstacle to make room for Iran in the region. USA and its allies perceive Iran as a serious threat to international security and impede all Iranian effort to improve its trade relations with Europe and Central Asian states. That is the why project to build gas pipeline from CAS through Iran and forward to Europe is effectively torpedoed by USA administration.

¹⁴⁸ Mehdi Amineh Parvizi and Houweling Henk, *Central Eurasia in global politics*, Boston : Brill, 2005,p.86.

¹⁴⁹ Martha Brill Olcott "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan" http://www.rice.edu/energy/publications/docs/GAS_InternationalGasTradeinCentralAsia.pdf, access July 15 2011.

Despite the US policy of “containment”¹⁵⁰ of Iran, the country seeks to enhance its ties in Central Asia through bilateral accords on pipelines and the construction of transportation routes, railways, air travel, roads to ports like Bandar Abbas. Iran also promotes multilateral fora, like the Muslim Economic Cooperation Organization (ECO¹⁵¹). Iran also particularly cultivates Turkmenistan and Kazakhstan on pipelines and transport networks. According to Shirren Hunter, “The best and most extensive relations are between Iran and Turkmenistan”¹⁵². These countries favor friendly relations owing to the length of their common borders, which were drawn under Stalin dictatorship.

Iran's options are limited to economic penetration and support or to attempts to expand its cultural-ideological influence. Economic weakness holds it back from a major role in Central Asia. Although Iran sponsors the Central Asian states in the Economic Cooperation Organization (ECO) and has the major goal of reestablishing the medieval Silk Road from the Middle East to China, it cannot offer the real support these states need. However “Iran has subsequently had some success in projective a more positive image in the region”¹⁵³

¹⁵⁰Mitchell, John, Beck Peter and Michael Grubb, *The new geopolitics of energy*, London : RIIA ,1996, p.180.

¹⁵¹Mohiaddin Mesbahi, *Central Asia and the Caucasus after the Soviet Union* , Gainesville : University Press of Florida, 1994, p. 254.

¹⁵²Shirren Hunter ,*Central Asia since independence*, Westport, Conn. : Praeger, 1996, p. 134.

¹⁵³Rasuly Paleczek and Julia Katyschnig, *Central Asia on display*, Wien: Lit , 2004, p. 456.

Chapter 5 Conclusion

Fight for access to energy resources constitutes very important part of global policy nowadays. International competition in that area is going to increase. The world economy demands more and more raw materials to sustain development. Great powers tend to secure energy resources supplies for themselves. They want to lay hold on supplies for a small price.

There are many aspects which make strong influence on the complicated situation in post-Soviet Central Asian states. First is geopolitical factor. Rich in raw materials states in Central Asia are object of international competition from neighbors and world powers. This competition makes Russia's position in Central Asia extremely vulnerable and fragile. Russia because of old connections from Soviet Union times still plays very active role, but this role is going to be limited. A new power is rising in the region – China. Russia does not have enough potential to become strong player in that race.

Geographical circumstances in Central Asia are important factors for this new Big Game. Localization of countries which possess significant amounts of natural gas is in one point of view – an obstacle and second point of view – a chance for countries which are located in Central Asia region. That location is not favorable for reaching the most tempting market – Europe which offers the best prices. Central Asia is too far away to provide raw materials to that precious market and is still depending on Russia on this case. Near localization of China is the chance to secure political and economical development of CAS. China's growing economy is in ever increasing demand of raw materials. Closeness of such a wealth and fast developing power offers a unique opportunity to Central Asian states. China has potential, political and economical will to built new pipelines for mutual benefit for both sides. In this way China has become a major buyer of Central Asian gas next to Russia.

Quantity of natural gas resources in Central Asia is enormous. Countries could be considered itself as the richest in terms of gas resources. Especially Turkmenistan is blessed by these assets. The capacity of natural gas reserves allows supplying present clients like China, Russia and Europe. Also, Central Asian states can seek new potential customers and secure even much better economical future. Energy state policy of individual Central Asian states are strongly oriented to reach that goal.

Localization and technical condition of gas transportation infrastructure – mainly pipelines is the main key in raw materials business, especially in case of natural gas. Old, but still operating post soviet pipelines need to be renovated and extended. Until now there are not enough financial assets to start this process. Russia as well as Central Asian States are not capable of achieving this goal. Pipeline built in cooperation with China is the only major project completed recently. Other plans – e.g. new pipelines from CAS to European Union bypassing Russia - still remain on paper only. However, this project sooner or later will be implemented.

Degree of dependency of Central Asian States to Russia in case of natural gas issue is decreasing. The most important changes include launching of new gas export routes to China and Iran, resulting in a diversification of CAS export routes. The biggest loser in the new situation is Russia. The Kremlin has lost the monopoly on gas imports from CAS, which had been its main instrument of political and economical influence on these countries. In the future, Moscow will probably continue to sabotage plans to export Central Asian gas to Europe independently of Russia, as may be illustrated by the attempt to take control over the East-West gas pipeline.

The geopolitical competition between Russia, China, U.S., E.U, and Iran is a big chance for economic and political development of Central Asian states. In the economic dimension, they view the new pipeline as an opportunity to diversify their gas export routes and obtain a better price for their gas. The construction of the pipeline was also expected to stimulate an influx of investments and economic development. In the social dimension, the incentives of Central Asia governments to

implement reforms in resource rich economies are reduced. The larger the rents, the less likely reforms become. These states could do more to liberalize foreign trade, simplify domestic law, cut corruption and improve practices to make it easier to set up new business. Kazakhstan is most advanced in this regard, while in Turkmenistan reforms have hardly begun.



Bibliography

Books

1. Alison, Roy, *Challenges for the former soviet south*, Washington, D.C.: Brookings Institution Press ,1996.
2. Amineh, Mehdi Parvizi and Houweling Henk, *Central Eurasia in global politics*, Boston: Brill , 2005.
3. Anker, Morten , Baev Pavel, Brunstad Bjorn , Overland Indra and Torjesen Stin , *The Caspian Sea Region Towards 2025* , The Netherlands, Asmsterdam: EburonNederland, 2010.
4. Autyand, Richard, Soysa Indra, *Energy, wealth and governance in the Caucasus and Central Asia*, New York : Routledge, 2006.
5. Bank, Stephen, *Russo-Chinese energy relations: politics in command*, London : GMB, 2006.
6. Brown, Archie, *Contemporary Russian politics*, Oxford : Oxford University Press, 2001.
7. Cornell, Svante and Niklas Nilsson , *Europe's Energy Security: Gazprom's Dominance and Caspian Supply Alternatives*, Washington D.C.: CACI-SRSP, 2007.
8. Croissant, Michael and Aras Bulet, *Oil and geopolitics in the Caspian Sea region*, Westport, Conn.: Praeger, 1999.
9. Cummings, Sall, *Oil, Transition and Security in Central Asia*, London: Routledge Curzon , 2003.

10. Curtis, Glenn, *Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan - country studies*, Washington, D.C. : Federal Research Division, Library of Congress, 1997.
11. Ebel, Robert , *China's Energy Future*, Washington, D.C. : The CSIS Press Center 2005.
12. Ebel, Robert, *Energy choices in the Near Abroad, Energy choices in the Near Abroad*, Washington, D.C. : The CSIS Press, 1997.
13. Godement, Francois, Francoize Nicolas, Taizo Yakushiji, *Asia and Europe. Cooperating for Energy security*, Paris: Institute francais des relations internationales , 2004.
14. Hunter, Shirren , *Central Asia since independence*, Westport, Conn. : Praeger, 1996.
15. Karrar, Hasan, *The New Silk Road Diplomacy. China's Central Asian Foreign Policy Since The Cold War*, Vancouver, B.C. : UBC Press, 2009.
16. Mesbahi, Mohiaddin , *Central Asia And The Caucasus After The Soviet Union* , Gainesville : University Press of Florida , 1994.
17. Mitchell, John, Peter Beck, Michael Grubb, *The New Geopolitics Of Energy*, London: RIIA, 1996.
18. Peck, Anne, *Economic development in Kazakhstan*, New York : RoutledgeCurzon, 2004.
19. Pourchot, Georgeta, *Eurasia Rising*, Westport, Conn.: Praeger Security International, 2008.
20. Rasuly, Paleczek Gabriela , Julia, Katyschnig, *Central Asia On Display*, Wien: Lit, 2004.
21. Sengupta, Anita, *Russia, China and Multilateralism in Central Asia*, India: Shipra, 2005.
22. Spechler, Dina, Martin Spechler, *Central Asia. Trade, Energy, and Security in The Central Asian Arena*, Seattle: National Bureau of Asia Research, 2006.
23. Stern, Jonathan, *The Future of Russian Gas and Gazprom*, Oxford: Oxford University Press, 2005.
24. Stulberg, Adam N, *Well-Oiled Diplomacy: Strategic Manipulation and Russia's Energy Statecraft in Eurasia*, New York: State University of New York Press, 2007.

25. Terterov, Marat, *Kazakhstan's Dynamic Economy: A Business and Investment Review*, London : GMB Publishing Ltd, 2006.
26. Davis Elizabeth, Rouben Azizian, *Islam, Oil, and Geopolitics: Central Asia after September 11*, Lanham, Md.: Rowman & Littlefield Publishers, Inc., 2007.
27. Wesley, Michael, *Energy security in Asia*, New York : Routledge , 2007.

Articles

1. Blank, Stephen , 1995, "Energy, Economics, and Security in Central Asia: Russia and Its Rivals", <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub119.pdf>, access July 2011
2. Blank, Stephen , The Strategic Studies Institute is the U.S. Army "Energy, Economics, and Security in Central Asia: Russia and Its Rivals," <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub119.pdf>, access July 15 2011.
3. Byrd, William and Raiser Martin "Economic cooperation in the wider Central Asia region", 2006, , <http://siteresources.worldbank.org/INTSOUTHASIA/556101-1101747511943/21363080/WiderCAWorkingPaperfinal.pdf> , access July 2011.
4. "Central Asia's energy risks," 2007, http://www.crisisgroup.org/~media/Files/asia/central-asia/133_central_asia_s_energy_risks.ashx, access July 15 2010.
5. Chernyavsky, Stanislav "Central Asian an Era of Change," http://eng.globalaffairs.ru/number/n_6188, access July 15 2010.
6. Crisis Group Asia Report "Central Asia's Energy Risks," Asia Report N°133, <http://www.crisisgroup.org/en/regions/asia/central-asia/133-central-asias-energy-risks.aspx>, access July 15 2011.
7. Fredholm, Michael "The Russian energy strategy & energy policy: pipeline diplomacy or mutual dependence?" <http://www.da.mod.uk/colleges/arag/document-listings/russian/05%2841%29-MF.pdf> , access July 15 2011.
8. Giuli, Marco "Nabucco pipeline and the Turkmenistan conundrum," http://www.cria-online.org/Journal/4/CRIA_Summer%2008_Whole%20Issue.pdf , access July 15 2011.
9. Jarosiewicz, Aleksandra, Maciej Flakowski "The Great Game around Turkmenistan," http://www.osw.waw.pl/sites/default/files/punkt_widzenia_17.pdf , access July 15 2011.

10. Olcott, Martha Brill, "International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan"
http://www.rice.edu/energy/publications/docs/GAS_InternationalGasTradeinCentralAsia.pdf, access July 15 2011.
11. Paramonov, Vladimir "The future supply of gas from central Asia to Russia: an expert assessment," <http://www.da.mod.uk/colleges/arag/document-listings/ca/08%2804%29JP.pdf>, access July 2010
12. Paramonov, Vladimir and Stokov Aleksey , The Defense Academy is the United Kingdom "Structural interdependence of Russia & Central Asia in the oil and gas sectors," 2008, [http://www.da.mod.uk/colleges/arag/document-listings/ca/07\(16\)VPEnglish.pdf](http://www.da.mod.uk/colleges/arag/document-listings/ca/07(16)VPEnglish.pdf), access July 15 2010.
13. Paramonov, Vladimir and Stokov Aleksey, "Russian oil and gas projects and investments in Central Asia", <http://www.da.mod.uk/colleges/arag/document-listings/ca/08%2819%29VP%20English.pdf> , access July 15 2011.
14. Spechler, Dina R and Spechler Martin C. "Trade, Energy, and Security in the Central Asian Arena,"
http://www.nbr.org/publications/strategic_asia/pdf/Preview/SA06/SA06_C_Asia_preview.pdf , access July 15 2011.
15. Yenikeeff, Shamil Midkhatovich, "Kazakhstan's gas: export markets and export routes," 2008, <http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2010.

Official documents

1. Shareholder of *KazMunNaiGas*, http://www.kmg.kz/page.php?page_id=1009&lang=2, accesses July 2010

Internet

1. “BP Statistical Review of World Energy 2011,” British Petroleum ,
http://www.bp.com/liveassets/bp_internet/globalbp/globalbp_uk_english/reports_and_publications/statistical_energy_review_2011/STAGING/local_assets/pdf/natural_gas_section_2011.pdf , access July 15 2011.
2. Afghanistan and Central Asia Research Information
<http://www.indiana.edu/~afghan/map.htm>, access July 15 2011.
3. Amsterdam, Robert, ”Perspectives on Global Politics and Business”
http://www.robertamsterdam.com/2008/03/bp_pulls_employees_from_russia.htm,
access July 15 2011.
4. California Energy Commission, <http://www.energy.ca.gov/lng/faq.html#650>,
access July 15 2011.
5. Central Asia-Caucasus Institute Analyst,
<http://www.cacianalyst.org/?q=node/4378/print>, access July 15 2011.
6. "Central Asia's energy risks" 2007,
[http://www.crisisgroup.org/~media/Files/asia/central-
asia/133_central_asia_s_energy_risks.ashx](http://www.crisisgroup.org/~media/Files/asia/central-asia/133_central_asia_s_energy_risks.ashx), access July 15 2011.
7. Central Intelligence Agency, *The World Factbook*
<https://www.cia.gov/library/publications/the-world-factbook/geos/kz.html>,
access July 15 2011.
8. Centre for Eastern Studies “The Turkmenistan-China gas pipeline considerably
strengthens China's position in Central Asia,”
[http://www.osw.waw.pl/en/publikacje/eastweek/2009-12-16/turkmenistan-
china-gas-pipeline-considerably-strengthens-chinas-posit](http://www.osw.waw.pl/en/publikacje/eastweek/2009-12-16/turkmenistan-china-gas-pipeline-considerably-strengthens-chinas-posit), access July 15 2011.
9. Chamber of Commerce and Industry of the Republic of Kazakhstan in the USA,
<http://kazcham.com/?p=128>, access July 15 2011.
10. EconoMonitor, “Energy Power Play: Courting Central Asia”
[http://www.rgemonitor.com/economonitor-
monitor/252525/energy_power_play_courting_central_asia](http://www.rgemonitor.com/economonitor-monitor/252525/energy_power_play_courting_central_asia), access July 15
2011.
11. Energy Information Administration
<http://www.eia.gov/countries/cab.cfm?fips=KZ>, access July 15 2011.

12. Energypedia, <http://www.energy-pedia.com/article.aspx?articleid=138229>, access July 15 2011.
13. Energypedia, <http://www.energy-pedia.com/article.aspx?articleid=140104>, access July 15 2011.
14. Gassco, <http://www.gassco.no/wps/wcm/connect/Gassco-EN/Gassco/Home/om-gassco/>, access July 15 2011.
15. Gazeta Wyporczy, <http://gospodarka.gazeta.pl/gospodarka/1,33181,5011662.html>, access July 15 2011.
16. Gazeta Wyporczy, <http://gospodarka.gazeta.pl/gospodarka/1,34581,5011662.html>, access July 15 2011.
17. Gazprom, Pre-Caspian gas pipeline
<http://www.gazprom.com/production/projects/pipelines/pg/>, access July 15 2011.
18. Gazprom, <http://www.gazprom.com/production/central-asia/>, access July 15 2011.
19. GlobalSecurity.org ,
<http://www.globalsecurity.org/military/world/russia/energy.htm>, access July 15 2011.
20. Heritage Foundation,
<http://www.heritage.org/research/reports/2007/11/europes-strategic-dependence-on-russian-energy>, access July 15 2011.
21. HydrocarbonsTechnology.com, <http://www.hydrocarbons-technology.com/projects/centralasiachinagasp/centralasiachinagasp1.html>, access July 15 2011.
22. International Crisis Group, "Central Asia's energy risks", 2007,
http://www.crisisgroup.org/~media/Files/asia/centralasia/133_central_asia_s_energy_risks.ashx, access July 15 2011.
23. International Energy Agency, World Energy Outlook 2009 Fact Sheet
<http://www.worldenergyoutlook.org/UK>, access July 15 2011.

24. Jamestown Foundation

[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32749](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32749), access July 15 2011.

25. Johnson's Russia List, "Securing Moscow's southern flank,"

<http://www.cdi.org/russia/johnson/6376-3.cfm>, access July 15 2011.

26. Kazakhstan Government site, "Kazakhstan, Russia and Turkmenistan agree to renovate the Caspian gas pipeline,"

<http://en.government.kz/site/news/052007/16>, access July 15 2011

27. Khodorkovsky & Lebedev Communications Center,

<http://www.khodorkovskycenter.com/>, access July 15 2011.

28. Polit.ru, <http://www.polit.ru/news/2006/11/28/gaz.html>, access July 15 2011.

29. Polityka, Krotki kurs gazownictwa ,<http://www.polityka.pl/krotki-kurs-gazownictwa/Lead33,1091,279283,18/>, access July 15 2011.

30. Polska Agencja Rozwoju Przedsiębiorczości, "Uzbekistan – Przewodnik dla przedsiębiorców" 2006, <http://www.parp.gov.pl/files/74/81/105/uzbekistan.pdf>, access July 15 2011.

31. Reuters, <http://uk.reuters.com/article/oilRpt/idUKL1840067520080318>, access July 15 2011.

32. ROGTEC Magazine, <http://www.rogtecmagazine.com/2009/09/turkmen-gas-export-strategy-and-trans.html>, access July 15 2011.

33. The Economist,

<http://www.economist.com/research/Economics/alphabetic.cfm?letter=M#monopsony>, access July 15 2011.

34. The Jamestown Foundation, "Kazakhstan's growing gas exports to go Russia's way"

[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=32749](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=32749), access July 15 2011.

35. The Jamestown Foundation,

[http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=33590](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=33590), access July 15 2011 .

36. The National Bureau of Asian Research, Natural Gas Development in China: Status and Prospects,

http://www.nbr.org/downloads/pdfs/ETA/PES_2011_Xu_Yongfa_Speech_Translation.pdf, access July 15 2011.

37. The Oxford Institute for Energy Studies

<http://www.oxfordenergy.org/pdfs/NG25.pdf>, access July 15 2011.

38. U.S. Energy Information Administration,

<http://www.eia.doe.gov/cabs/Centasia/NaturalGas.html>, access July 15 2011

39. UK Reuters, Kazakhstan sees 70 pct gas price rise from 2009.

<http://uk.reuters.com/article/oilRpt/idUKL1840067520080318>, access July 15 2011.

40. Upstream the international oil and gas newspaper

<http://www.upstreamonline.com/live/article158831.ece>, access July 15 2011

41. Wirtualny Nowy Przemysl, <http://www.wnp.pl/artykuly/gdzie-rura-nie-dojdzie-tam-Ing,5121.html>, access July 15 2011.

42. КазМунайГаз http://www.kmg.kz/page.php?page_id=1009&lang=2, access July 15 2011.

43. Нефтегазо-вая Вертикаль <http://www.ngv.ru/article.aspx?articleID=22567>, access July 15 2011.