

Research paper on natural gas in russia

[Business](#), [Marketing](#)



1. Brief History of Russian economic development and the role of nature gas in it.

2. Literature – the outlook of two articles with the related topics, critical analysis of the authors point of view regarding the importance of nature gas owned by the Russian Federation in the geopolitical and internal policy.

3. Body:

- The place of Russia among the largest gas owning countries.
 - The main Deposits locations of nature gas
 - Natural gas in the fuel and energy balance of Russia
 - The Russian nature gas market
 - Government support and legislative background
4. Summary and conclusion

1. Introduction.

Before the industrial revolution came into being, some countries were not as established as they are and among them was Russia. It was a good start that some researchers had already discovered some of the natural resources but the only obstacle was how to exploit them. This is what proved to be the main setback. They had poor economic systems as the then already established industries were not as effective as they would have been expected to be in revenue generation. Things however changed onwards when technology began to be discovered and it came with major impacts in many sectors of the economy. Technology is what made it possible for scientists to discover ways in which resources could be exploited. It is from this time that Russia began to exploit its resources to the maximum. This came along with huge positive impacts on its economy. Following from the

above information, there is a need to actually evaluate and analyze the impact of natural gas on the Russian economy. This is in terms of how has it impacted the Russian society as a whole and what pros and cons have been experienced in the process.

2. Literature

OPEC and Russia's Greatest Fear: Losing their Energy Weapon, By Keith Kohl. Friday, March 4th, 2011

Europe isn't so lucky

Keith Kohl has raised the latent and not so widespread view on the Russians influence and the dependence of the importers countries. The Author shows us the real power of the Russian Federation that was expended far away from its borders. Now it is clear that the European Union is getting into energetic dependence from its North East neighbour: each of the powerful and industrial developed countries can do nothing but buying Gas from Russia or increase the level of alternative energy using or reducing the amount of energy used that cannot affect the economic efficiency of the country (especially industrial and energy-intensive fields). Russian government does strongly cooperates with the Gazprom ltd and uses this resource to increase the geopolitical position in the World.

Europe deprived of Russia's liquefied natural gas, by Dan Pototsky. March 29, 2013

The article states that the Russian Federation is no more interested in the exports to the well-known consumers in Europe, and the government is just focusing on the Asian market. Thus, As for me, Gazprom would not be so interested in the European market if it had not started constructing « South

steam» or « Yuzhnij Potok» spending billions of Russian rubles to set the pipes on the bottom of the Black Sea. From the other side, Russia depends on the countries which are specialized in gas and oil transporting (like Ukraine or Belorussia) that doesn't let it feel controlling the European market. Moreover I must totally disagree with the Dan Pototsky's opinion regarding the expansion of the market by the independent suppliers. The Russian Federation is interested in the Old World's market (both of economic and political reasons) and that is sure it doesn't want to lose it but increase the influence.

3. Data

Natural gas - a mixture of gases formed in the bowels of the earth from the anaerobic decomposition of organic matter it is a vital component of the world's supply of energy. It is one of the cleanest, safest, and most useful of all energy sources. Despite its importance, however, there are many misconceptions about natural gas. (Natural Gas) Natural gas refers to mineral resources. Natural gas at reservoir conditions (in terms of occurrence of the Earth's interior) is in the gaseous state - in the form of individual clusters (gas fields) or as a gas cap oil and gas fields, or dissolved in the oil or water. Under standard conditions (101.325 kPa and 20 ° C) natural gas is only a gaseous state. Natural gas may also be in a crystalline state in the form of natural gas hydrates.

Pure natural gas is colorless and odorless. To facilitate the determination of the possibility of a gas leak, it added in a small amount of odorants - substances with a sharp odor (rotten cabbage, rotten hay, rotten eggs). Most often used as an odorant thiols such as ethyl mercaptan (16 g per 1000 m³

natural gas).

In the sedimentary shell of the Earth's crust has enormous deposits of natural gas. According to the theory of nutrient (organic) origin of oil, they are formed by the decomposition of the remains of living organisms. It is believed that the natural gas produced in sedimentary shell at high temperatures and pressures than oil. This agrees with the fact that gas fields are often located deeper than the oil field.

The place of Russia among the largest gas owning countries.

Russia has Enormous reserves of natural gas (Urengoy field). Iran, the majority of countries in the Persian Gulf, the United States, Canada own a little less overall volumes. And the European countries like Norway, the Netherlands are also worth noting.

Natural gas extraction by countries in cubic meters per year is shown on the Figure 1

Russia has the world's richest natural gas resources. Potential (potential + future) Russian natural gas resources are estimated at 151. 3 trillion cubic meters. m, which is about 40% of the world. However, the most plausible future resources are in this volume only about 24% (Table 2). Russia is characterized by high concentration of natural gas - 71. 2% of proven reserves are concentrated in 28 unique fields (with balance reserves of over 500 billion cu m.), Another 21. 6% is contained in 86 large (75-500 billion cu m.) objects.

Russia is considered to be one of the largest producers of natural gas in the world economy (Pirani, 2009) .

The country is the leading producer of natural gas in the European region. It has surpassed countries like Germany, Ukraine, Britain, and many others. This is after an analysis of the economic systems in some countries was done and when it was compared to that of Russia, Russia stood out to have the most stable economic system. This is owing to the impact of the exploitation of natural gas in the country. The Russian government has actually done its part in the exploitation of this rich resource (Kramer, 2007).

The main Deposits locations.

About half of the prospective resources located in Western Siberia, more than a quarter - on the shelf of the Barents and Kara Seas. More than two-thirds of proven natural gas reserves of free countries is concentrated in the Yamal-Nenets Autonomous Okrug (Yamal). The European part of the country for less than 10% of proven reserves. Almost 40% of Russian gas reserves are concentrated in undeveloped and / or inaccessible areas.

The bulk of stocks of highly dedicated to the Nadym-Pur-Taz region (NPTR) Yamal-Nenets Autonomous Area - the main gas producing region of the country. It is focused around a quarter of Russian proven reserves of free gas, but here, not all of them can be considered as highly effective. The most suitable for the development of gas producing horizons upper Cenomanian, the so-called Cenomanian gas, forming large deposits of relatively simple geological structure at shallow depths (up to 1500 m). Senoman gas NPTR called " dry", composed mainly of methane.

Key Cenomanian gas reserves are concentrated in the fields of the left bank

of the river unique Pur (Urengoiskoye, Yamburgskoe, Bear), those are dealing with the gas production for a great deal of years and have more than 50% of capability. Located in the east, between the river and the Pur Taz, the newly developed fields Polar, the South Russian and some other are not more than 30% of proven reserves of Cenomanian gas NPTR. However, only about 70% of current proven reserves of Cenomanian gas NPTR can be profitably extracted, as in the practice of domestic gas production, gas production is ubiquitous in the depletion drive in which the stocks in shallow deposits, are characterized by low energy potential, as they enter the final stage of operation is increasing the proportion of so-called low-pressure gas to extract and transport that requires more effort, and some of it cannot be removed. In the deeper horizons NTPR, rocks of the Early Cretaceous (Valanginian and Achim gas) and Jurassic age, holds about 16% of proven reserves of free gas Russia. The gas is characterized by a complex structure: in addition to methane, there are present in significant quantities other hydrocarbons, ethane, propane and butanes, are valuable raw material gas chemical as well as condensate. This so-called " wet gas" technology development is more complex. Contained in the " bold" gas condensate is a heavy hydrocarbons in the subsoil in the gaseous (vapor) state. By reducing the pressure reservoir (reservoir during operation or in contact with the surface) of these hydrocarbons are condensed to liquid, forming a so-called unstable condensate. Development of stocks of " fat" is not possible without creating a gas transportation system and processing of condensate. In NTPR an infrastructure that enables the development of stocks of " fat" of gas, albeit insufficient.

Valanzhinian gas reserves that lies below the Cenomanian deposits at depths of 2-3 thousand meters, to a large extent involved in the refinement and development lie at depths of 3. 2-3. 8 thousand meters at the base of the Lower Cretaceous, productive Achimov only begins. Explored reserves Achimov gas is still small (up only about 4% of Russian), but its resources are significant, and their development could contribute to the maintenance of gas production in the region. However, the development of gas deposits is very difficult: they differ in complex geological structure and abnormally high reservoir pressures and require special technology development. Production cost Achimov gas 10-15 times higher than the cost of the Cenomanian, but for a long time developed developed deposits, Cenomanian gas reserves are nearing depletion, Achim gas may be a reserve for prey. Such is the Urengoy field, which is dedicated bulk explored to date Achimov gas reserves, and its development is cost-effective. Outside the Nadym-Pur-Taz region of the Yamal-Nenets autonomous district is still about 25% of Russian proven reserves of natural gas on the " dry" Cenomanian gas accounts for just over a quarter of this amount. However, the region is not yet adapted for gas production - no transmission network companies to prepare gas for transportation and processing facilities. By the development of gas reserves on the Yamal Peninsula is now launching " Gazprom".

Just over 20% of stocks of " dry" gas is concentrated in the east of the country, mainly in remote areas with poor infrastructure. In the European part of Russia, the main non-associated gas reserves are " bold" gas unique Orenburg and Astrakhan fields, production of which has environmental constraints due to its high content of sulfur and the remaining reserves are

dispersed in a large number of mainly small fields. Total in Russia on the "dry" gas accounts for about 42% of proven reserves of free gas. The rest of the volume is "fat" gas, about half of the stock of which is contained in the interior of the Yamal-Nenets Autonomous District, about 13% - in the Barents Sea, about 10% - in the Astrakhan region, about 9% - in the fields of the Siberian Federal District. The overall situation is shown on the diagram (Figure 3).

In total proven reserves of free gas about 10% of the gas cap gas, forming clusters of the oil deposits. This gas is an important source of energy in the development of oil deposits: it provides the necessary mode (so-called regime of the gas cap). In this regard, working off of the gas fields should, as a rule, be coordinated with oil. About 13% of Russia's natural gas reserves contain rare, unique properties component - helium, for its reserves country ranks second in the world after the United States. Pre-extraction of helium complicates the development of the fields, as it requires the construction of facilities for the extraction, storage, and special transport systems. However, the development of stocks without prior extraction of helium it irrationally because of the strategic importance of this useful component.

Natural gas in the fuel and energy balance of Russia

Russia plays an important role in the global balance of supply and demand in the markets of natural gas and oil, as well as the potential and coal. It acts as one of the guarantors of the overall energy security and stability in the long term. Russia accounts for over 13% of world oil production, about 18% of world production of natural gas and more than 4% of world coal production. Summary Russia produces about 11% of primary energy, or

about 1.3 billion tons of energy resources of oil equivalent, about 45% of which comes from exports, and 55% - for internal consumption. This situation leads to a significant dependence on the development of demand and prices on world energy markets. Although Russia is not responsible for the world's balance sheets, it is objectively called to play a stabilizing role in the global energy sector.

In absolute terms, the domestic energy consumption in Russia from 1992 to 2007 declined from 859.7 million to 714.5 million tons of oil equivalent, i. e. 17%. Meanwhile the output of primary energy consumption in the country raised for about 11%, from 1.2093 billion tons of oil equivalent to 1,348. (Fig. 4).

Over the past 25 years, the total share of the three major natural energy resources - oil, natural gas and coal - in Russia's energy consumption decreased from 93% to 88%. The share of natural gas in total energy consumption increased by 11%, while the share of oil and coal decreased by 49% and 58% (Fig. 5).

The Russian nature gas market

The Russian market is the largest and potentially most attractive market for gas, "Gazprom". In the domestic market group "Gazprom" sells more than half of sales gas. In 2010, revenues from gas sales of the Group (net of VAT and excise duty) on the domestic market reached 614.7 billion rubles., Exceeding the 24% level in 2009 had sales of 262.1 billion cubic meters of gas (in 2009 - 262,6 billion cubic meters. meters). Russia also happens to supply Europe with about one-quarter of their natural gas demand. (Kohl, 2011). Moreover The Russian Federation has recently signed a treaty to

supply China with the gas, that fact does prove one more time the power and influence of Russia in the world's geo policy as well. (WSJ)

Price is one of the most important factors for the welfare of any product in a given economy (Dudek, 2006). The current economy in Russia has been favored as a result of the high prices that the country enjoys over gas products. The Graph 7 shows a comparison between the gas price for Russia to Europe in comparison with the Turkmen gas prices. The prices are from 2003 to 2010.

Thus from Schmidt-Felzmann (2011) presentation, it is apparent that Russia has used natural gas as a weapon for fighting and punishing its supporters. This has been achieved through increasing the prices in addition to threatening to cut off supplies. However, it restrains from talking about the initiatives in foreign policy that are not connected to pipeline or other natural gases subjects. A slight decrease compared to 2009 due to the occurrence of the Group "Gazprom" in December 2009, JSC "TGC-1", in which the gas sales volume of 6.2 billion cubic meters. m is from this period are classified as intra.

The development of the Russian gas market in accordance with market principles

Since 2006, the Government of the Russian Federation taking steps to develop the Russian gas market in accordance with market principles.

Government support and legislative background
In May 2007, the Government of the Russian Federation adopted a resolution number 333, which provides for a series of steps aimed at liberalizing pricing in the gas industry. In particular, the "Gazprom" has acquired the right to release

certain categories of gas consumers at bargain prices, with the upper limit of the FTS regulates prices. In 2011, this limit is 10% of the regulated price.

The Russian Ministry of Energy believes, in the event that liquefied natural gas (LNG) exports from Russia are freed up, the European market must be closed to independent producers, and their gas should be sold only to the Asia-Pacific region (APR) in addition to Gazprom supplies. (Pototsky, 2013)December 31, 2010 the Government of the Russian Federation adopted a resolution number 1205. The document establishes a transition period (2011-2014 years), during which the regulation of the wholesale price of gas for all consumers (except population) will be based on the pricing formula, which provides a phased achievement of equal yield of gas supplies to foreign and domestic markets, and taking into account the cost of alternative fuel.(Russian gas market by Gazprom)

4. Summary and conclusion

No doubt that the Russian Federation is one of the most influential player in the World power carriers market. It owes one of the largest deposits of the natural resources thus most of them are located far away from the main consumers (internal and external) that makes the cost of production much more higher than competitors have.

Natural gas from Russia is sold with high prices and this has been one of the factors that have led to the rapid economic growth and development for the country. Russia is one of the countries that have one of the fastest growing economies. It is clear that the country is able to maximize on the natural resources available such as natural gas amongst others. The federal government has played a very important role in trying to ensure that the

available resources are effectively used in the production of natural gas. This could be one of the reasons why the production of natural gas in the country has progressed to high levels over the past decade.

The government also use the Gas market to manipulate with the geopolitical questions in the World geopolitical arena: European and Asian markets, hard pressing on the Ukraine's government in order to get the Gas transporting delivery pipe.

References

Kramer, (2007). " Moscow presses bp to sell a big gas field to Gazprom". New York Times.

Pirani. (2009). Russian and cis gas markets and their impact on Europe. Oxford University Press.

Dudek. (2006). Should Russia increase domestic prices for natural gas?. Washington: Elsevier.

Schmidt-Felzmann. (2011). Eu member states' energy relations with Russia: Conflicting approaches to securing natural gas supplies. . Geopolitics, 16(3,): 574-599.

Naturalgas. org. (n. d.). Retrieved from <http://www.naturalgas.org/overview/background.asp>

Kohl, K. (2011, March 4). OPEC and Russia's Greatest Fear: Losing their Energy Weapon Retrieved from <http://www.energyandcapital.com/articles/opec-russia-fear/1450>

The U. S. surpassed Russia as world's leading producer of dry natural gas in 2009 and 2010 - Today in Energy - U. S. Energy Information Administration (EIA). (4th of March 2012.). Retrieved from <http://www.eia>.

<https://assignbuster.com/research-paper-on-natural-gas-in-russia/>

gov/todayinenergy/detail.cfm?id=5370

Russia and China Sign Major Natural Gas Supply Pact - WSJ.com. (n.d.).

Retrieved from <http://online.wsj.com/article/SB10001424127887324557804578376510628682312.html>

com/article/SB10001424127887324557804578376510628682312.html

Russian Natural Gas - Monthly Price - Commodity Prices - Price Charts, Data, and News - IndexMundi. (n.d.). Retrieved from <http://www.indexmundi.com/commodities/?commodity=russian-natural-gas>

com/commodities/?commodity=russian-natural-gas

US, Russia vie for largest natural gas reserves - Business on NBCNews.com.

(n.d.). Retrieved from

Dan Pototsky (2013, March 29). Europe deprived of Russia's liquefied natural gas Russia Beyond The Headlines. Retrieved April 28, 2013, from http://rbth.ru/business/2013/03/29/europe_deprived_of_liquefied_natural_gas_from_russia_24373.html

ru/business/2013/03/29/europe_deprived_of_liquefied_natural_gas_from_russia_24373.html

1. Natural gas extraction by countries in cubic meters per year

2. Data on natural gas reserves have been proved in the major world regions

3. Distribution of gas reserves

4. Dynamics of the production and consumption of primary energy in Russia

5. Power consumption of the primary structure on the types of

6. Annual dry gas production (EIA, 2012)

7. A comparison between the gas price for Russia to Europe in comparison with the Turkmen gas prices. The prices are from 2003 to 2010.

8. Russian Natural Gas Monthly Price - US Dollars per Thousands of Cubic Meters (IndexMundi)

<https://assignbuster.com/research-paper-on-natural-gas-in-russia/>