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**THE ROLE OF THE HYDROCARBON TRANSMISSION SYSTEM
TOWARDS ACHIEVING THE STATUS OF ENERGY SUPERPOWER
IN THE 21ST CENTURY**

Summary. This article aims to introduce the energy policy program assumptions of the Russian Federation. An analysis led to the conclusion that the Russian Federation avails the network of hydrocarbon transmission pipelines to obtain an energy superpower status. The transformation of the energy sector is not restricted to measures aimed at increasing efficiency. It similarly plays a vital role in building the state's potential. More so, it co-creates the crucial instruments of international influence. Through building the network of pipelines, the Kremlin consistently attains its geopolitical aim of being an important player in the international arena. Ineffective endeavours to get out of the Russian domination in that area has allowed Russia to maintain its infrastructure monopoly and dominance of Russian gas on the markets of Central and Eastern Europe.

Keywords: Russian Federation, energy policy, transmission system, hydrocarbons

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1. INTRODUCTION

This study is to present the main program assumptions regarding the energy policy of Russia. Special emphasis was placed on the employment of the energy raw materials transmission system to attain an energy superpower status, thus, become an important player on the international arena. The research activities were preceded by the following thesis: The intensification of activities in the field of energy policy is intended not only to increase budgetary revenues but also to strengthen the international position of the Russian Federation. Centrally controlled economy allows the Russian Federation to expand its pipeline network on an unprecedented scale.

The research methodology was based on the analysis of normative acts, past and current data and literature.

2. RUSSIAN ENERGY SECTOR AT THE TURN OF THE 20TH AND 21ST CENTURY

Historically, the power of the USSR was based to a large extent on the extraction and exploitation of oil and natural gas. Hydrocarbons were a significant policy instrument. The breakdown of the Soviet Union led to an economic crisis. Additionally, the drop in oil and gas prices (USD 20-30 / barrel) affected the energy sector. At the same instant, the outdated infrastructure and commitments of the former Soviet Union caused Russia's export capacity for these raw materials to significantly decrease. The basic document regulating the post-Soviet system of administering Russian natural resources was introduced in 1992 as the "Strategy for the Energy Development of the Russian Federation". In December 1994, the "Energy Development Strategy of the Russian Federation (main assumptions)" was approved by the government. In May 1995, the President of the Russian Federation issued a decree entitled "Main guidelines for energy policy and restructuring of the fuel and energy industry of the Russian Federation for the years up to 2010", and in October "The main guidelines for the energy strategy of the Russian Federation" were approved [5,p.119].

The growth of the energy sector in the years 2000–2003 was prompted by the investment freedom of large national oil companies as well as the increasing demand for oil and gas, consequently, rocketing prices of these raw materials on foreign markets. In addition, Russia had to struggle with the diminution of resources in Western Siberia and a decline in production growth. The other hindering factors were: a new division of ownership in the sector, meagre condition of the pipeline network and deficient capacity of export pipelines, unsatisfactory investments of oil companies in resource recovery, deterioration of the resource base, state monopoly in the field of crude oil transport, excessive fiscalism, inconsistent regulatory system, no guarantee of investment security, high level of corruption [13].

3. STRATEGIC DOCUMENTS IN THE FIELD OF RUSSIAN ENERGY SECTOR

Since W. Putin came to power, territorial expansion has been replaced by energy expansion. President Putin, motivated by the need to build up the presidential office's position with other political actors in Russia, introduced a wide-ranging program of socio-economic development of Russia until 2010. The basic premise of the document was to take steps to strengthen the authority of the central government, lessening the gap between Russia and other developed

countries and sanctioning Russia's position as one of the world leaders [14, p.114]. The presented policy was based on the thesis that the fundamental Russian national interest was to retain the status of a superpower able to create international order in a supra-regional dimension [10, p.42]. In 2003, the government of the Russian Federation adopted Russia's Energy Strategy until 2020. The main objective of the energy strategy was to maximise the effective use of natural energy resources and the potential of the energy sector to sustain economic growth, improve quality of life, and strengthen Russia's foreign economic positions. The energy factor has become a fundamental element of national security, conditioned by the functioning of the national energy sector [2, p.4]. An increase in world oil prices, based on which gas prices are indexed, was a factor conducive to the implementation of the energy strategy, allowing the transformation of Russia, "from a non-functional military power into a new energy power" [6]. According to the provisions of the Russian Federation's Energy Strategy until 2020, Western Europe remained the key direction of oil and gas exports from Russia. The emphasis was put on transit countries; however, the clear desire to become independent from them by building offshore pipelines was also marked. The significant development of the Asian direction was similarly noted. During the meeting of the Security Council of the Russian Federation held in December 2015, President Putin outlined the concept of Russia as an "energy superpower". It was noted that: "Energy is the most important driving force of global economic development. It has always been so and will remain so for a long time"[9]. The concept of Russia emerged as an "energy superpower" based on state-controlled energy companies. The core of the energy strategy due to the specificity of gas trade is primarily the state monopolist in all gas market segments in Russia – Gazprom [11, p.85].

According to the provisions of the energy strategy of 2003, the main objective of political influence on the so-called close to abroad countries was to develop their energy transmission systems and force economic cooperation leading to the abandonment of projects [10, p.49]. Various (economic, political, including military) instruments were applied on countries attempting to gain real political sovereignty (Georgia and Ukraine)². Towards the second group

² The recognition of the EU area as the primary direction of exports of energy raw materials determined the position of the transit countries. Russia has taken action to dominate these countries, which was particularly evident in relation to Belarus and Ukraine. The first major gas crisis between Belarus and Russia took place in February 2004. Gazprom, which, due to Minsk's halt to the process of creating a joint venture based on Beltransgas, announced a significant increase in gas price, for which Minsk did not agree. On February 18, 2004, Russian Gazprom suspended the transfer of raw material to Belarus via the Beltransgas network for 18 hours. This struck not only the Belarusian, but also the Lithuanian and the Polish audiences. Beltransgaz began to retrieve the missing raw material from the Jamal gas pipeline. The crisis ended with Gazprom's actual capitulation forced to unscrew the faucet. The crises in relations on the RF-Belarus line, causing interruptions in the supply of raw material, ended in January 2007. A similar course was attempted to subordinate Ukraine to the strategic interests of RF. In March 2005, Gazprom informed Ukraine that the price of gas would be raised to European market rates. The Ukrainian government had entered into negotiations, the fiasco of which was created by the "Ukrainian gas crisis of 2006". Both sides were unable to reach an agreement on 1 January 2006. Russia accused Ukraine of stealing \$25 million worth of gas. On January 24, 2006, Naftohaz pleaded guilty to the charges, explaining that the gas was used for heating purposes in Ukraine in January 2006. Finally, under pressure from the European Union, a compromise was reached. The exclusive gas supplier for Ukraine became RosUkrEnergo, in which half of the shares were acquired by Gazprom [15, p. 107]. In relation to the Central Asia and Caucasian area, it was to block the possibility of transmission of energy raw materials from the region and the failure of other (non-Russian) international players to take control of deposits. To this end, not only an unstable ethnic situation was used, but also the ambiguities associated with the legal status of the Caspian Sea. Russia's conflict with Georgia over areas of Abkhazia and South Ossetia has made the Caspian region unstable in the eyes of the whole world, and thus, reduced its attractiveness in the rivalry of energy power powers. [4, p. 113]. Crimea is, from Russia's point of view, a strategic area for many reasons. This is the place from which the Black Sea Fleet can sail to the Mediterranean Sea. There is also a deep-sea port, which can be very helpful with huge underwater drilling

of countries in the region, considered as potential partners, a two-track policy was involved. Kazakhstan and Tajikistan are examples of such countries. Because of their geographical location, these countries found themselves in the sphere of influence of not only Russian but China as well. Therefore, Russian policy concerning these countries varied, depending on the relationship with China. Russian policy then was aimed at their political and economic domination. This objective was accomplished by significant investments and supporting the development of the mining sector and the expansion of the energy storage and transport system.

The provisions of the strategy were revised as a result of the economic crisis and the lapse of the five-year period. In 2009, a new strategy was adopted, the Energy Strategy of the Russian Federation until 2030, which expanded and specified the provisions of the preceding document. The 2009 Energy Strategy pointed to the need for a measurable increase in the extraction and export of energy resources and far-reaching modernization/modernisation of the Russian energy sector. The provisions of the Strategy included the requirement of increasing Russia's share in the global energy market to strengthen the country's political role in the international arena.

According to the 2009 document, EU Member States continued being Russia's key market for oil and gas; however, it is noteworthy that the share of Asian countries in Russian exports of these raw materials has been systematically expanding. The Russian energy strategy until 2030 estimated that gas exports in 2030 will expand by 154-159 billion m³ compared to 2010. It projected that in the initial period of implementation of the strategy (until 2020), most of the surplus raw material would be bought by customers from Europe. In the following term (by 2030), it would be targeted at the Far Eastern market, which would predictably shape sales of approximately 70-75 billion m³ of gas to customers from China, Korea or Japan. Eventually, PRC was to become the main receiver of Russian gas. The "Energy Strategy until 2030" assumed that 22-25% of exported oil and 19-20% of exported gas should go to Asia. To implement those assumptions, efforts were made to allow oil distribution via pipeline to China and the Pacific Coast; gas supplies via pipelines to China and both Korean countries; development of LNG installations for the needs of the Asian market [8,p.65]. On May 1, 2014, in Shanghai, in the presence of the presidents of Russia and China, the representatives of Gazprom and the Chinese energy company, CNPC, signed an agreement on supplies of Russian gas to China. The thirty-year contract stipulates the export of 38 billion m³ of gas yearly from the Russian East Siberian deposits (Chayanda and Kovykta) via the Siberia Force pipeline (Power of Siberia 1), which was put into use in December 2019. Moreover, Russia expressed its desire to carry out the Altai project (according to Gazprom's new terminology - Power of Siberia 2), the Western Route (gas supplies from Western Siberia to northwestern China via the Sakhalin-Khabarovsk-Vladivostok gas pipeline). A memorandum amongst the Russian Gazprom and the Chinese CNPC was signed in 2015 [7, p. 37].

In the period 2001-2014, over 20,000 km of gas pipelines were created in Russia, which significantly stimulated the increase in the level of gasification. Against this background, the existent domestic gas transit infrastructure became remarkably impoverished. For many years, Gazprom invested mostly in the building of new export buses without regard to the renovation of the national infrastructure.

As claimed by the 2020 energy strategy, Russia is expected to become the leading provider of energy resources, warranting transnational energy security. To this end, Russia has attempted a consummate geopolitical pipeline strategy, encompassing the creation of transmission

operation in search of hydrocarbons. In addition, Crimea has export terminals in the port of Odessa, military construction shipyards in Mikolajow, refinery, huge chemical plants, silos for grain exports, extensive resources of natural resources. It is estimated that natural gas reserves in the Black and Azov seas, off the coast of Crimea, amount to 2 trillion cubic metres and more than 430 million tonnes of oil [18].

directions advantageous to the Kremlin and obstructing plans thwarting or disrupting its domination [7, p. 29-31].

Russia's crucial interests have involved the establishment of an integrated energy and energy transport infrastructure in the bordering regions of Europe and Asia, the buildout of international energy transfer systems, and safeguarding non-discriminatory energy transportation. To apply this supposition, prompt action was taken to set up the following transmission facilities:

- construction of the oil pipeline connecting Eastern Siberia - the Pacific Ocean;
- construction of the "Sever" and "Yug" pipelines;
- construction of "Severnii Potok" (Nord Stream) and "Yuzhniy Potok" (South Stream) gas pipelines;
- the construction of a transit gas pipeline connecting Europe with the Yamal Peninsula was completed;
- seaport infrastructure and liquid hydrocarbon transport systems (oil, condensate, liquefied natural gas, etc.) were developed.

A vital role was performed by the Yamal-Europe gas pipeline. It was set up in 1994 and put into service in 1999; however, the maximum level of transmission capacity (33 billion m³ of gas per year) was accomplished in 2006. From then on, the gas pipeline was heavily exploited.

In 2002, the Blue Stream gas pipeline was constructed and built with a total capacity of 16 billion m³ at the estimated cost of 2.4 billion USD, exporting gas directly from Russia via the Black Sea to Turkey.

Nord Stream is the third key pipeline connecting to Europe. In September 2005, Gazprom, in cooperation with German BASF and E.ON, entered into an initial contract on the building of a gas pipeline from Russia to Germany. Its construction started on April 9, 2010, the first line has operated since November 8, 2011, the second from October 2012.

One of the objectives stated in the Energy Strategy 2030 is creating infrastructure enabling production and distribution of LNG. Currently, sole gas liquefaction plant exists in Russia, initiated in 2009 within the framework of the Sakhalin 2 project. The venture's investors are Gazprom (50% plus 1 share), the Dutch-British Royal Dutch Shell (27.5% minus 1 share), Japanese companies Mitsui and Mitsubishi (12.5% and 10% shares, respectively). The other prioritised pipeline is Yamal LNG project, which was built in cooperation with: Novatek - the largest gas producer in Russia after Gazprom (50.1% shares), the French group, Total (20% shares), the Chinese group, CNPC (20% shares) and the Chinese Silk Road Fund (9.9% shares). Gazprom declared schemes to construct two gas liquefaction plants: in the Russian Far East as part of the Vladivostok LNG project and in the Baltic Sea as part of the Baltic LNG project [7, p. 12].

Consolidating Russia's position of strength in global energy trade required high and constant revenues from the energy carriers on the European market. Russia, for obtaining a superior position on the European and Central Asian markets expanded its markets for its energy resources. Actions were taken to build new transmission installations detouring countries opposed to the Russian concept of the European fuel market, particularly Poland, Ukraine and the Baltic States. North Stream became the venture that deprived Poland and Belarus of the status of transit countries, directly connecting the Russian supplier with its German recipient via the Baltic Sea. This project significantly weakened the negotiating position of these countries with Gazprom, which ruthlessly pursues Russian interests, persistently forcing new gas pipeline projects focused on forming regional gas axes (Nord Stream 1, South Stream, Turkish Stream, Nord Stream 2) [7,p.34]. More so, it should be noted that these projects were

not always profitable. In many cases, their motivation was purely political. This is perfectly illustrated by the activities related to the North Stream project³, which made EU countries even more reliant on Russia's gas supplies, exposing the fragile solidarity of EU countries defied by bilateral agreements [1, p. 261-273].

By taking over the network of pipelines running through the territory of the Russian Federation from the Caspian Sea region and the countries of Central Asia, the Kremlin is taking far-reaching measures to block the creation of alternative transport routes. Russia is masterly using the political opportunities offered by trading in natural resources. It seems that, in the Kremlin's opinion, they are much more effective than using military potential, the use of which may always meet with retaliation. The blockage of gas and oil supplies leaves the other actors with no means of putting pressure on Russia. This allowed the Russian Federation entangling Europe with a gas pipeline network, to build a potential much more effective than military means [3, p. 99].

The EU Member States' response to Russia's energy expansion was supposed to be the construction of the Nabucco⁴ gas pipeline. The project assumed liberation from Russian gas supplies, and thus, augmenting energy security. However, for many reasons, this project was not finalised. The first reason for the failure of this project was the implementation of the energy mix, calling for the increased use of renewable energy. The economic crisis also contributed to the blocking of the discussed project. More so, the failure of the Nabucco gas pipeline was significantly influenced by weaknesses resulting from the decision-making process of the European Union, and above all, the lack of a unified position on the issue of a common energy policy. All this worked to the advantage of the Kremlin, which, while having an infrastructure monopoly, maintained the dominance of Russian gas on the markets of Central and Eastern Europe. Worth of note as well is that the described situation proved favourable for Russia in connection to the concept of the South Stream gas pipeline, crossing the Black Sea, connecting the coasts of Russia and Bulgaria. The first line was to transport gas via Serbia to Hungary, Slovenia and Austria [12]. In December 2014, Russia renounced the South Stream, on behalf of the different forms of collaboration with Turkey - Turkish Stream, leading to Turkey and further to the Greek border instead of via the Black Sea to Bulgaria [17, p. 77]. On October 10, 2016, President Putin paid a visit to Istanbul, during which the intergovernmental agreement on the construction of the Turkish Stream gas pipeline was signed (ratified by Turkey and Russia in December 2016 and February 2017). Subsequently, contracts were concluded between South Stream Transport B.V. controlled by Gazprom and Allseas Group AG for the building of two offshore lines of the gas pipeline. This investment follows Russia's vital interests, depriving Ukraine and Belarus of the status of a transit state while bypassing the Baltic States [7, p. 36].

³ The gas pipeline connects Russia (Vyborg) with Germany (Greifswald) via the Baltic Sea, bypassing Poland and the Baltic Republics. The planned route of the gas pipeline passes through the waters of the economic zone of three countries (Finland, Sweden and Denmark) that agreed to build this investment.

⁴ The Nabucco project officially started in 2002 and began with initial talks between concerns from countries where the pipeline was to run - Austrian OMV, Turkish BOTAS, Hungarian MOL, Romanian Transgaz and Bulgarian Bulgargaz. Two years later, these entities established a company called Nabucco Gas Pipeline International GmbH.

4. NEW DIRECTIONS OF THE EXPANSION

The Arctic Zone belonging to RF has potentially 200 gas and oil reserves. Global warming is a factor that encourages action in this area, making access to deposits easier. An additional impulse for intensifying plans of exploitation is undoubtedly the increase in raw material prices on world markets. Russia's plans include acquiring technology for the extraction of raw materials and the development of land infrastructure. However, these plans are primarily hampered by the lack of the necessary capital for the very demanding drilling in the Arctic region. Moreover, Russia still lacks modern technology. Russian oil extracted from the Arctic, called Arctic Oil (ARCO), entered the global market in 2014. It comes from the newly built only Prirazlomnaja platform in the Pecs Sea [16, p. 135]. In 2014, Russian crude oil extracted in the Arctic from the only Prirazlomnaja platform in the Pechora Sea entered the world market. To strengthen its position, the Russian Federation undertook international activities aimed at extending its borders and taking over 1.2 million km² under its jurisdiction in the Arctic Ocean. A scientific expedition completed in the fall of 2014 collected samples taken from the bottom of the Arctic Ocean showing that the Lomonosov Ridge, an underwater mountain range extending to the North Pole, is a continuation of the continental shelf. The strengthening of the military presence in this area was noticeable as the military bases were reactivated from the times of the USSR located there. In April 2014, President Putin ordered the establishment of a group of submarines and surface ships, strengthening the border in the Arctic. Similarly, steps were taken to increase the region's export opportunities. As such, the ordinance of June 14, 2019, providing for an increase in the Arctic transport corridor at the base of the Northern Sea Route, through giving the Dikson seaport the status of an international port and intensified its transshipment capacity (construction of the terminal) for crude oil.

5. CURRENT STRATEGIC DOCUMENTS SETTING THE ENERGY POLICY

In connection with the end of another five years, the Energy Strategy was revised. New circumstances were considered, the sanctions imposed on Russia after the annexation of Crimea, the conditions introduced in the Third EU Climate Package, and finally, the American concepts of liquefied gas exports and the shale revolution. Apart from the postulates to reduce the energy consumption of the economy and to build and modernise the infrastructure of the fuel and energy industry to implement development programs and export concepts of the Russian Federation, the 2015 Strategy introduced a significant novelty; the requirement to correlate individual sectoral policies. The new strategy assumed a departure from the pro-export approach, a characteristic of the previous documents, towards a more rational use of hydrocarbons. The strategy outlines two main goals related to the pursuit of the energy superpower status. First, maintaining control over the transmission and storage system, both by regulating the transmission price and storage costs, and the fact that state monopolies are the administrator of transmission services. The second goal was to increase export opportunities, inter alia, by developing the capacity to transport liquefied gas. The above assumptions determined the transport policy. The regulation of the government of the Russian Federation of March 18, 2016, defined the key projects supporting the transport of hydrocarbons in newly adopted directions. The construction of new seaports (including on the Yamal Peninsula), the construction of icebreakers and the connection of seaports with other transport infrastructure became priorities. Regulation No. 2101 of the Government of the Russian Federation of September 30, 2018, assumed activities for the development of transport of crude oil and its

refined products as well as gas and gas condensate, development of pipelines (as part of the "North" project) to increase the supply of crude oil products to the port of Primorsk. The far-eastern direction of expansion was also observed in the context of creating transport policy, which was reflected, among others, in the content of the Government of the Russian Federation No. 436 of 14 March 2019 on the investment project for the construction of a liquefied gas transshipment terminal in the Kamchatka Region.

Significant changes in the energy policy of the Russian Federation took place in 2019. The legal basis for the current energy policy is the Energy Security Doctrine of the Russian Federation. The key objective set out in this document was to ensure the country's energy security, particularly, to protect Russia's political and economic interests. Such a definition of the strategic goal is consistent with the provisions of the document of a broader scope, Economic Security Strategy of the Russian Federation until 2030, which assumes that Russia is to transform into a modern state, resistant to economic fluctuations, capable of dominating sales markets and gaining production capacity in areas affecting energy safety. Also, this document indicates that economic sanctions resulting from the annexation of Crimea, which limits the inflow of capital and access to modern technologies, are important challenges. Russia's position may also be threatened by the dynamic situation in the world economy and the positioning of Asian countries as a centre of economic development. The current trend of energy policies of developed countries towards a green, low-carbon and energy-saving economy was, not overlooked. What remains unchanged, and is emphasised in each of the discussed documents is the belief that energy policy and the potential of the fuel and energy sector are key instruments of Russian security policy and serve to shape the international order and determine the political position of the state.

6. CONCLUSIONS

Over the last two decades, the energy policy of the Russian Federation has evolved significantly. Strategic documents based on long-term forecasts have, as a matter of fact, undoubtedly contributed to the implementation of its assumptions. The goals specified therein are not only of a strategic nature but also indicate operational elements. In addition, they are regularly updated, allowing for flexibility. It is worth noting that energy policy is not carried out in isolation. It is related to the transport and security policy. This undoubtedly contributes to its implementation. All major investment projects are supervised by the central authorities, which guarantees its success. Another propitious factor is that the Russian political scene is very stable. This enables the consistent implementation of the energy policy objectives and related sector policies.

The changes within the energy policy resulted from the necessity to adapt the Kremlin's actions to the prevailing conditions. Hence, they are now focused on adapting export policies to global hydrocarbon demand. The basic challenge faced by the Russian Federation in this respect is the fluctuations in prices of raw materials and the resulting decline in revenues from hydrocarbons exports. Another important obstacle in the implementation of strategic goals may be insufficient expenditure on modernisation of the transmission infrastructure and the energy industry. The sanctions imposed by the EU after the annexation of Crimea are also important, as they significantly limit the inflow of the necessary capital and technology, which are so important for the process of modernising the energy industry. In conclusion, the above factors may significantly limit the Russian Federation's ability to influence.

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