Natural gas supplies as an instrument of geopolitical conflict between the Russian Federation and Ukraine

ABSTRACT: The natural gas supply is used from Russia Federation as a political instrument in the geopolitical and territorial conflict with Ukraine. The effectiveness of Russian strategy towards Ukraine is due to the fact that power in Kiev is also exercised by the pro-Russian politicians and supported on the part of Ukrainian oligarchs. The two countries are interdependent in terms of energy by means of the existing gas infrastructure and long-term contracts, because Ukraine guarantees the Russian Federation the transit of natural gas to Europe through its system of transmission gas pipelines, and Russia pays for the transit and used to supply the agreed amount of gas to Ukraine. For the first time – in 2016 – Ukraine didn’t import natural gas directly from the Russia Federation. This article attempts to obtain an answer to the research question, whether Ukraine actually strives to diversify its natural gas supply. What part of this policy is the Ukrainian political instrument in terms of Russia, and what part is the real political objective? Especially in the context of the gas contract between both States, ending in 2019. What role will be played the underground gas storage in the geopolitical struggle? Despite Nord Stream II the Russian Federation still needs the Ukrainian pipelines to fulfill contractual obligations in gas supplies to Europe. What are the strategic goals of the energy policy of Ukraine and Russia? The geopolitical as well as geo-economic theories will be applied. Moreover, a factor analysis as well as a decision-making analysis will be used.
The political analysis method and the forecasting technique are applied to obtain, not only theoretical, but also practical input.

KEYWORDS: natural gas, pipelines, geopolitics, Ukraine, Russia Federation

Introduction

Natural gas is an energy resource of strategic importance for a country’s energy security and the competitiveness of its economy (Ruszel 2014). Disturbing the continuity of the supply of this resource may lead to a loss of people’s trust in current authorities, financial losses for energy-intensive industry, and in an extreme situation, the loss of political power in the country. In political science it is acknowledged that natural gas supplies may be used as an instrument of political pressure on other decision-making centers. Research analysis of the Russian energy policy confirms that Gazprom has repeatedly used natural gas supplies to Ukraine in an instrumental way (Grabau 2018; Goldthau and Boersma 2014; Fedorov 2013). Daniel Yergin stresses that withholding Russian gas supplies to Europe in 2006 as a result of the crisis between Russia and Ukraine was a shock for EU leaders (Yergin 2012). The gas crisis between Russia and Ukraine occurred again in 2009 (Bettzüge and Lochner 2009; Ruszel 2015). The two countries are interdependent in terms of energy by means of the existing gas infrastructure and long-term contracts (Ascari 2011), because Ukraine guarantees the Russian Federation the transit of natural gas to Europe through its system of transmission gas pipelines, and Russia pays for the transit and used to supply the agreed amount of gas to Ukraine. However, at present, both countries are trying to become more independent and are applying active diversification policies. In the case of Russia, this includes the construction of Nord Stream II and Turkish Stream, and in the case of Ukraine, the diversification of sources and directions of natural gas supply. This article attempts to obtain an answer to the research question whether Ukraine is actually striving to diversify its natural gas supply. What part of this policy is the Ukrainian political instrument regarding Russia, and what is the real political objective? Especially in the context of the ending of gas contract between both states in 2019. What role will be played by underground gas storage in the geopolitical struggle? Despite Nord Stream II, the Russian Federation still needs the Ukrainian pipelines to fulfill its contractual obligations in gas supplies to Europe. What are the strategic goals of the energy policy of Ukraine and Russia? Geopolitical and geo-economic theories will be applied in the work in order to answer the questions. Moreover, a factor analysis as well as a decision-making analysis will be used. The political analysis method and the forecasting technique are applied to obtain, not only theoretical, but also practical input.
1. Theoretical framework

The problem discussed of the article is approached from the perspective of the theory of international relations. The main study subject is countries, and the study object – their political interests, which is reflected in the theory of realism (Morgenthau 1956; Niebuhr 1960; Carr 2001). Representatives of this theoretical school emphasize the importance of the instruments of pressure and power in international relations (Łoś-Nowak 2000), which may take the form of i.a., energy blackmail or withholding natural gas supplies. The theory of complex interdependence, formulated by Robert Koehane and Joseph Ney, was applied in the article (Keohane and Nye 1977). From the theoretical perspective, interdependence is a situation in which different countries or actors from different countries have a mutual influence on each other (Rana 2015). The authors of this theoretical concept point out that increasing the importance of economy and the development of other forms of political interdependence are currently becoming a strategic political instrument. This theoretical model assumes that each actor has different needs, capabilities and priorities in foreign policy (Keohane and Nye 1997). The concept includes three aspects connected with interdependence: a) the multiplicity of channels connecting communities, which involve various formal and informal connections between authorities, elites and transnational corporations; b) the lack of hierarchy of issues that are the subject of relationships between the countries, as well as blurred division into internal and foreign policy; c) no military force is used in the situation of complex interdependence (Keohane and Nye 1977). It is also stressed that non-state actors, whose goals and policies may differ from those of the mother country, are playing a more and more important role. Apart from this theoretical concept, the article reflects the approach by Kenneth Waltz, who emphasized that the contemporary competition between countries takes place in the economic and technological sphere (Waltz 1993). Edward Luttwak points out that the relationships between politics and the economy are crucial in terms of understanding any country’s power and strength. Therefore, he argues in his texts that a country’s policy is based on gaining advantage over another country through instruments and measures other than force (Luttwak 1990). The subject of discussion in this article is Ukraine and the Russian Federation with their complex interdependence with regard to the object of the study: natural gas and energy infrastructure. Political interdependence between Ukraine and the Russian Federation in gas policy produces both costs and benefits for each side.
2. Diversification policy from the perspective of Ukraine and the Russian Federation

In 2017 Ukraine consumed 32 billion m$^3$ of natural gas, of which domestic extraction was about 18 billion m$^3$ and imports 14 billion m$^3$. It should be reminded that at the end of November 2015 Ukraine withheld the import of natural gas from the Russian Federation and decided to purchase this energy source from Western European companies. In 2016 natural gas was supplied to Ukraine by 34 companies, delivering a total of 11.1 billion m$^3$, while in 2017 it was already 67 companies, and the volume of supplies increased by 27% to 14.1 billion m$^3$ (Naftogaz Europe 2018). In 2017, over 70% of imported natural gas to Ukraine was supplied by Slovakia, about 20% by Hungary and 10% by Poland. However, in the period January–June 2018 Ukraine purchased 4.18 billion m$^3$ of natural gas, of which companies registered in Switzerland (e.g. Axpo Trading AG) delivered 1.72 bcm of this energy source, the second supplier was Germany with deliveries at level 1, 35 billion m$^3$ while the third is Poland in the amount of 334 million m$^3$. At that time, natural gas was supplied to Ukraine also by: Great Britain (310 million m$^3$), Hungary (117 million m$^3$), Slovakia (89 million m$^3$), Luxembourg (57 million m$^3$) and Austria (21 million m$^3$) (Zaniewicz 2018). However, the Stockholm Arbitration Court Ruling in 2018 requires Naftohaz to purchase 4 billion m$^3$ of natural gas from Russian Gazprom. This means that the Russian energy source may return to the Ukrainian market as part of the direct deliveries in the nearest future. It cannot be ruled out that Russian gas is also supplied by one of the Swiss companies. On the other hand, in 2017, the Russian Federation sent 93 billion m$^3$ of natural gas to Europe and Turkey via Ukrainian gas transmission pipelines (Stępiński 2018).

For Ukraine, the diversification of gas supplies means purchasing it from a West European company and transferring it via Slovakia, Hungary or Poland. For Russia, diversifying gas exports to Europe involves the need to build new gas infrastructure in the form of Nord Stream II and Turkish Stream. In other words, Ukraine is trying to become independent from Russian gas, and Russia, from Ukrainian gas pipelines. The current interdependence between Russia and Ukraine is based on a gas contract for the supply of gas to Ukraine and a transmission contract. Both contracts are in force until December 31, 2019. Therefore, both sides are negotiating to achieve their own strategic goals. The decisions of the Arbitration Tribunal in Stockholm (Kardaś and Konończuk 2018), which ordered Gazprom to pay Naftogaz USD 4.63 billion in compensation for transferring lower amounts of gas through Ukrainian gas pipelines than contractual obligations, are going to play a very important role. Ukraine is currently sequestering Russian assets on account of Russian financial liabilities. The Tribunal also decided that Ukraine was obliged to accept 4 bcm natural gas a year (Naftogaz 2018). Appeal proceedings may last many months, and legal proceedings will soon be one of the instruments used by both sides in negotiations concerning a new transit connect (Kardaś and Matuszak 2018).
3. Importance of underground natural gas storage facilities

Ukraine has very well developed strategic gas infrastructure, including a system of gas pipelines with the total length of over 36 thousand km, 14 thousand km of which is high pressure gas pipelines with the diameter of 1,020–1,420 mm (Kardaś and Matuszak 2018). Generally, the transmission capacity of Ukrainian gas pipelines exceeds 290 bcm natural gas at the northern and eastern border, and 130–170 bcm at the southern and western border (Szeptycki 2008). The transmission capacity of natural gas transfer via Ukraine to Europe is currently nearly 140 bcm a year. An important role is played by the: Alliance, Brotherhood and Northern Light gas pipelines, which are used to transport not only Russian gas, but also the one from the Central Asian countries. It reaches to the following countries: Poland, Slovakia, Czech Republic, Austria, Italy, Germany, France, Switzerland, Hungary, Romania, Bulgaria, Turkey, Greece, Macedonia and Moldova (Energy Charter Secretariat 2010). At the moment, almost 20% of Ukrainian gas pi-
pipelines have been used longer than 45 years, and approx. 15%, longer than 35 years (Energy Charter Secretariat 2010). In addition, gas losses in the transmission system may amount to 20% or more (Energy Charter Secretariat 2010)*. Thus, the system of pipelines requires investment expenditure for modernization.

Apart from the system of gas pipelines, Ukraine has the largest natural gas underground storage facilities in Europe. They are of strategic importance, since they ensure the possibility of balancing gas supplies to Europe in periods of increased demand, which usually occurs in winter. Ukraine has a total of 13 natural gas underground storage facilities (see: Table 1) with the capacity of 31 bcm (12 of them are administered by the company Ukrtransgaz) (Ukrtransgaz Today 2018). Ukraine built its underground storage facilities in the years 1964–1988. This means that the oldest elements of this energy infrastructure are now over 50 years old and need to be modernized. Taking the forms of development of natural gas trade in the market into consideration (e.g., virtual reverses, virtual gas hubs), we can see that this kind of energy infrastructure is growing in importance. Roberto Roson and Franz Hubert emphasize that market play is possi-

* It is estimated that the average hydraulic efficiency of Ukrainian gas pipelines is about 80%, so nearly 20% of natural gas is lost at compressor stations.

Table 1. Capacity of underground natural gas storage in Ukraine

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of the underground gas storage</th>
<th>Active capacity (bcm/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Biche-Voltsko-Uherske</td>
<td>17.05 bcm</td>
</tr>
<tr>
<td>2.</td>
<td>Bohorodchanske</td>
<td>2.3 bcm</td>
</tr>
<tr>
<td>3.</td>
<td>Dashavske</td>
<td>2.15 bcm</td>
</tr>
<tr>
<td>4.</td>
<td>Oparskie</td>
<td>1.92 bcm</td>
</tr>
<tr>
<td>5.</td>
<td>Uherskie</td>
<td>1.9 bcm</td>
</tr>
<tr>
<td>6.</td>
<td>Chervono-Partyzanske</td>
<td>1.5 bcm</td>
</tr>
<tr>
<td>7.</td>
<td>Solokhivske</td>
<td>1.2 bcm</td>
</tr>
<tr>
<td>8.</td>
<td>Kheychivske</td>
<td>0.7 bcm</td>
</tr>
<tr>
<td>9.</td>
<td>Hlibivske</td>
<td>1 bcm</td>
</tr>
<tr>
<td>10.</td>
<td>Proletarske</td>
<td>1 bcm</td>
</tr>
<tr>
<td>11.</td>
<td>Krasnopopivske</td>
<td>0.42 bcm</td>
</tr>
<tr>
<td>12.</td>
<td>Verhunske</td>
<td>0.4 bcm</td>
</tr>
<tr>
<td>13.</td>
<td>Oleshivske</td>
<td>0.31 bcm</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13 storages</td>
<td>30.95 bcm</td>
</tr>
</tbody>
</table>

ble on the basis of gas infrastructure (Roson and Hubert 2014). More and more companies are deciding to develop the sale of natural gas on the Ukrainian market, which is connected with the need to conclude contracts for using gas networks and storage capacities. EU countries can store their gas in Ukrainian storage facilities, and Ukraine offers Western European companies the storage of almost 14 bcm of gas in the customs warehouse mode (storage for up to 3 years without paying fees or customs duties) (BiznesAlert 2018). This way, energy concerns can invest in gas storage in Ukraine and store it when the price on the market is low and sell it when the price increases. The development of this kind of activity would maintain the cost-effectiveness of the infrastructure and create a gas hub based on the potential of gas storage facilities. Therefore, competition for access to storage facilities may intensify in the future, and interest of Western European concerns may grow. Ukraine would benefit from the establishment of legal regulations that would contribute to the increased attractiveness of this gas infrastructure while retaining the present ownership structure.

Map 1. Location of underground gas storage in Ukraine
Source: own study based on Naftohaz

Mapa 1. Lokalizacja podziemnych magazynów gazu na Ukrainie
4. Strategic goals of energy policy of Ukraine and Russia

The research analysis of the strategic goals of Ukraine and Russia should be performed with reference to the geopolitical context and with consideration of historical issues. This leads to the conclusion that the Russian Federation perceives the territory of Ukraine as the zone of its geopolitical influences and opposes any political activities that would make Ukraine closer to the structures of Western European organizations, such as the European Union and the North Atlantic Treaty Organization. Using different society-connecting channels allows the Russian Federation to reach Ukrainian interest groups represented by oligarchs, who upon receiving profitable business proposals exert influence on Ukrainian politicians in line with Russian interest. Russians support specific political candidates in order to achieve certain political goals in the long run (Paniuszkin and Zygar 2008; Matuszak 2012). In the years 1991–2004, many Ukrainian oligarchs became rich thanks to activity in the gas industry. Thus, there is a visible extra plane of complex interdependence between oligarchs from Ukraine and the Russian Federation. The strategic goals of Ukraine are not always in agreement with the business goals of the Ukrainian oligarchs, which creates an additional space for diplomatic activity of Russia.

However, referring to strategic goals, we can see that from the perspective of the Russian Federation the short-term goal is to achieve an agreement guaranteeing the maintenance of a natural gas transmission capacity through the territory of Ukraine after December 31, 2019. A new transit contract could be a short-term one (until 2022) and could be concluded for the transfer of a much smaller amount of natural gas than at present (approx. 60 bcm). From a medium-term perspective, Russia will strive to build and achieve the full capacity of Nord Stream II (55 bcm) and to complete Turkish Stream. In the long-term perspective, the Russian Federation will want to stop using Ukrainian gas pipelines to transit gas to Europe. Furthermore, Russia will attempt to control the transfer of natural gas from Central Asia to Europe or, if there is some competition, to block it. This would produce bilateral asymmetric relationships allowing more severe political actions against Ukraine.

On the other hand, there is the perspective of Ukraine, which is facing a unique opportunity to sign a contract for the transit of Russian natural gas to Europe and Turkey in the situation of no alternative via Russia. The short-term goal is to sign the transit contract involving the proper

* The Kremlin decision-makers in the person of Viktor Yanukovych looked for an ideal partner for gas transactions even before the presidential elections in 2004, when they were sure that this candidate, by winning, would lead to the rapid signing of contracts with the Russian Gazprom. Gazprom supported Viktor Yanukovych in the 2004 presidential election. This Ukrainian oligarch was Leonid Kuchma’s “man” and very often played in Moscow, and visited President Vladimir Putin’s residence in Novoogariev near Moscow for his birthday. Three months before the 2004 elections, Gazprom and Naftogaz signed gas supply agreements to eliminate independent intermediaries from trading in raw materials and to entrust the matter to Gazprom’s subsidiary company RosUkrEnergo. Eventually, Victor Yushchenko won the elections in December 2004, and on January 1, 2005, as a result of the “repair” of the Turkmenistan gas pipeline, Gazprom interrupted the supply of natural gas, which was resumed after the increase in the price of the gas. It is worth noting that Dmitri Firtash (RosUkrenergo, EuralTransGas), who had good relations with Leonid Kuchma and Viktor Yanukovych, was involved in gas transactions between Russia and Ukraine.
transit tariff, reservation of transmission capacity, and data exchange (Energetyka24 2018). The medium-term goal is to ensure that Gazprom will carry out the Tribunal’s decision. Apart from financial claims, it is even more important to allow the transit of gas from Central Asia via Ukrainian gas pipelines. The long-term goal for Ukraine is to maintain the status of the transit country for Russian natural gas supplies to Europe. However, the key issue is the amount of the transferred gas. It is in Ukraine’s interest to transfer as much as possible (at least 60 bcm a year), since this directly translates into budget revenues. It seems that the results of the parliamentary election in Ukraine in 2019 will have a significant influence on the achievement of strategic goals of both countries. The Russian Federation supported candidates with the pro-Russian attitude and those willing to agree to Russian conditions in terms of disputable gas issues. During the election time, internal conflicts in Ukraine may aggravate, and after the election, decentralization forces in different political circles lobbied by groups of oligarchs will even intensify. It is also possible that another gas crisis will take place at the end of 2019, which could be used by Russia as an argument for the construction of new infrastructure bypassing Ukraine (Kost 2018).

Conclusion

Regarding the research questions posed in the article and drawing conclusions from the research analysis, we can clearly see the energy interdependence between Ukraine and the Russian Federation. However, both countries have an active policy of diversification of import or export, respectively. Ukraine has ceased to import gas directly from Russia, and Russia has built Nord Stream and is building more gas pipelines in order to limit the transit via Ukrainian pipelines.

In the following years, the nature of complex energy interdependence between Ukraine and the Russian Federation will be affected by many factors. Firstly, Ukraine has its own resources of natural gas as well as the potential of shale gas, and increasing the national extraction of gas will lead to a directly proportional reduction in import. The same effect would be achieved by reducing the consumption of natural gas in some sectors of the economy in favor of the development of renewable energy (Child et al. 2017). Secondly, the policy of diversification of natural sources and directions of natural gas supplies to Ukraine will be continued, but as a result of the decision of the Arbitration Tribunal in Stockholm, the country will be obliged to purchase 4 bcm of natural gas directly from the Russian Federation. Perhaps when negotiating the extension of the transit contract, Russia will try to ensure a larger amount of gas supply to Ukraine. The results of the parliamentary election in 2019 will be crucial, because they may give Russia additional opportunities to influence the decision-making processes in Ukraine. Thirdly, the speed of the construction of the Nord Stream II gas pipeline will also be important, as it is expected to provide an additional 55 bcm of natural gas via a direct sea connection between the Russian Federation and the Federal Republic of Germany. From the point of view of commercial energy cooperation, the cheapest route of natural gas supply to Europe after 2019 would still be the
Ukrainian transmission gas pipelines. Some analytical and research centers in Germany argue the construction of Nord Stream II is pointless, but work on the project is being continued for geopolitical reasons (Neumann et al. 2018). In addition, the Russian Federation is building the Turkish Stream gas pipeline. Fourthly, with consideration of Gazprom’s contractual obligations to European countries and the transmission capacity of the existing network of transmission gas pipelines in different countries, the total discontinuation of transfer through Ukrainian gas pipelines is rather improbable, yet the reduction of their use is more and more real. In 2017, Gazprom supplied 193 bcm of natural gas to Europe (the largest amount, 53.4 bcm, to Germany) (Malinowski 2018). If some of the factors described above do occur, they will contribute to changing the system of mutual energy interdependences. In the case the Russian Federation gets the advantage, in the theoretical model this will mean greater asymmetry, which could lead to the risk of increasing the possibilities of more severe political and economic Russian interventions in Ukraine. The provisions and conditions of the transit contract concluded after 2019 will be of strategic importance for mutual political relations. Even now, the future contract is clearly the object of negotiation efforts, and apart from the two sides, the largest EU countries also play an active role and the final arrangements may be affected by the decisions of the Arbitration Tribunal in Stockholm. Ukraine’s strategic goal should be to negotiate the longest possible transit contract with Russia and to move the points of reception of Russian natural gas by EU partners from the Ukrainian-EU border to the Russian-Ukrainian border (Kardaś and Iwański 2018). Ukraine should use its underground storage facilities to attract Western European companies to conclude contracts for the storage of gas. It is in the interest of Ukraine and the EU to enforce EU law in terms of the establishment of the transmission tariff. Let us imagine a scenario in which Nord Stream II is built but the transmission tariff at the Ukrainian pipelines is still more attractive and competitive. The complex energy interdependence will enter a new phase of asymmetry between Ukraine and Russia, and the dominant position will be taken by the country which displays a greater determination and efficiency in the achievement of its political goals.

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Dostawy gazu ziemnego jako instrument geopolityczny pomiędzy Federacją Rosyjską a Ukrainą

Streszczenie


SŁOWA KLUCZOWE: gaz ziemny, gazociągi, geopolityka, Ukraina, Federacja Rosyjska