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Aleksander Rezmer

(Wyższa Szkoła Administracji i Biznesu w Gdyni, Polska)

Shaping energy security in Central and Eastern Europe on the example of Belarus, Lithuania and Poland

Słowa kluczowe: bezpieczeństwo energetyczne; Polska, Białoruś; Litwa

Keywords: energy security; Poland; Belarus; Lithuania

Introduction

Energy security is definitely one of key elements of the national security[1]. The paramount importance of having stable sources of energy was especially highlighted by the 1973 oil crisis when Arab oil producers used oil as leverage to influence political events. However, long before that, access to energy sources vital for the economy could prompt the nation to enter a war as Japan did in 1941 after having been embargoed by Western powers. Constant Russian attempts to use energy as a tool for influencing other countries have been well-known for years and such actions are most-

[1] A. Bałamut, *Polityka bezpieczeństwa energetycznego Polski w latach 2000–2015*, Kraków 2017, p. 13.

ly responsible for rapid improvement of energy security among Central and Eastern European countries[2].

The dissolution of the Soviet Union and regaining full independence of the countries from the Eastern Bloc rendered the energy system of the region out-of-date. These countries found themselves responsible for their energy policies and security, contrary to the Soviet era, when economic plans for the whole Eastern Bloc were created in Moscow. Three decades have passed since the transformation but many contemporary energy issues of the states from the region are direct consequences of the Soviet past. For thirty years the countries from Central and Eastern Europe have been struggling to adjust their energy systems to their real needs and gain energy security. These challenging goals have recently been accompanied by a sharp turn towards decarbonisation and renewable energy sources, loss of interest in the nuclear power and notorious use of energy as a means of the foreign policy by the Russian Federation. It is worth analyzing how successful the countries of the region are in their completion of those goals and which strategies have turned out to be most effective.

The concept of energy security is multidimensional. According to J. Ciborski[3] there are five factors that shape energy security: geopolitical, climatic, social, technical, terrorist.

It seems that this framework ought to be supplemented by economic factors as the wealth of a nation also plays an important role in shaping energy security, especially if a country is fully or partly dependent on another state. Solid economic base makes it easier to shift from traditional fossil fuels towards renewable energy and that is why this factor ought not be neglected, especially now.

B. Molo[4] argues that in order to achieve energy security it is necessary to take into account:

– quantity and quality of energy resources,
– geographic location of resources,

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[2] M. Zaniewicz, *Gaz zamiast czołgów, czyli w jaki sposób Rosja zmusza Europę Środkową do posłuszeństwa [ANALIZA]*, 4 October 2019, www.eneegetyka.com, access: 12.08.2020.

[3] J. Ciborski, *Bezpieczeństwo energetyczne*, [in:] *Energia w czasach kryzysu*, ed. K. Kuciński, Warszawa 2006, p. 128–129.

[4] B. Molo, *Rozwiązywanie problemów globalnych na przykładzie ochrony środowiska*, [in:] *Międzynarodowe bezpieczeństwo energetyczne w XXI w.*, ed. E. Cziomer, Kraków 2009, p. 184–185.

– condition of infrastructure,
– economic potential,
– ability to manage energy with the respect for environment protection.

For the purpose of this article energy security can be defined utilizing combination of key elements from both frameworks and is as follows: National energy security is the state in which political, economic and technical conditions enable to meet a country's demand for energy in the long-run with the respect for sustainable development principles.

It is worth mentioning that for large exporters of energy carriers, the meaning of energy security can be slightly different. For those countries like Russia, where about 50% of the budget is formed by energy sector[5], energy security is the ability to sell energy and have this process under maximum control. That is why exporters of energy expand their networks of transmission and manipulate prices to discourage governments from searching for alternative sources of fuels.

Central and Eastern Europe is the place where different strategies of energy security have been implemented over the years by the countries from the former Soviet sphere of influence and thirty years after transformation there is a unique chance of assessment which policies were the most effective. The analysis is especially interesting as all those countries began to independently shape their energy security in the same moment in the past, providing an opportunity for accurate comparison.

Case study 1: Lithuania

As long as Lithuania was a part of the Soviet Union, its situation in the energy sector was stable. The majority of electricity was produced at the Ignalina Nuclear Power Plant located close to the border with Belarus and Latvia that were at that time republics of the USSR. Natural gas was supplied through a branch of the Yamal pipeline from Central Russia and crude oil was transferred by means of a branch pipeline of the Druzhba pipeline. In addition to this, an oil-processing plant was located near the town of Mažeikiai.

[5] A. V. Bogoviz, S. V. Lobova, Y. V. Ragulina, A. N. Aleekseev, *Russia's energy Security Doctrine: Addressing Emerging Challenges and Opportunities*, "International Journal of Energy Economics and Policy" 2018, 8(5), 1–6.

Since the regaining of independence it has become evident that Russia had monopolistic position in terms of crude oil and natural gas supplies and was willing to use it in a form of political pressure. As the technology applied in the Ignalina plant was unsafe, similar to Chernobyl-type reactors, the facility raised international concern.

The Lithuanian authorities have made several steps to strengthen its independence in the energy sector. First of all, an oil terminal near the village of Būtingė in the northern part of the country was built and has been in operation since July 1999[6]. It is the first major petroleum project that Lithuania implemented after it attained independence. Although initially planned as export terminal, it has given the Mažeikiai refinery another source of feedstock and broke down the monopoly of Russia. The importance of diversification of energy sources has become evident the moment Russia shut down the oil pipeline in a display of discontent after acquiring the Mažeikiai refinery along with Būtingė by a Polish state-owned company Orlen.

Another step towards national energy security was made in the natural gas sector. In order to get rid of dependency from Gazprom, it was decided to create Klaipėda liquefied natural gas floating storage and regasification terminal which have been in use since 2014[7]. This facility can supply all of Lithuania's need for natural gas and 90% of Latvia's and Estonia's national demand in the future.

The possession of a nuclear plant should be regarded as an advantage in terms of energy security. However, in the case of Lithunia, it caused a lot of inconvenience for two reasons: first of all, unsafe reactors posed a constant threat. Secondly, Lithuania's integration with the European Union necessitated its closure as it was one of the conditions of accession. The plant ceased to operate in 2009 but the decision was an issue for national dispute for several years as Lithuanians were afraid of increase in prices of electricity. Now, Lithuania imports around 70% of its power, mainly from Sweden. There is also a transmission line to Poland.

In an attempt to attain greater energy security, the Lithuanian authorities applied new energy policy in 2018[8]. Its main assumptions are further

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[6] *Terminal and Pipelines*, www.orlenlietuva.lt, access: 30.09.2020.

[7] *Independent economic analysis of the long-term liquefied natural gas import solution to the republic of Lithuania*, a report to Klaipėdosnafta, April 2020, p. 8.

[8] M. Zaniewicz, *Litwa przyjęła strategię energetyczną – więcej OZE, integracja z Polska i prosumenci*, energetyka24.com, access: 20.09.2020.

reduction of dependency from Russia and shift towards renewable energy sources. The first aim is to be achieved mainly through completion of Gas Interconnection Poland–Lithuania which will connect Lithuania with European Union gas transmission system. The second objective does not only comply with the EU policies but is also expected to provide Lithuania with energy self-sufficiency by 2050.

Lithuania's example indicates that the process of building energy security is multidimensional, long and costly but if consequently conducted, it can be very effective. For a country that possesses virtually no fossil fuels achieving energy security must be partly built on partnership with neighbouring countries which respect the rules of democracy and trade and Lithuania has succeeded in finding them. Finally, long-term investment in renewable energy sources and effective integration into European energy transmission systems are those pillars that in a few decades are likely to make Lithuanian dream of energy self-sufficiency and security come true.

Case study 2: Poland

In the early 90s Poland, like many other countries from the Soviet sphere, found itself in a difficult situation of energy dependency on Russia. The supplies of natural gas and crude oil were delivered through pipelines from Russia and this led to unfavorable conditions of contracts for deliveries of those energy carriers. However, Poland is a transit country for the main Russian pipelines transferring oil and gas to Western Europe and it was unlikely for Russia to shut them down without a serious reason. Poland also extracts its own natural gas which covers approximately one third of the national demand. Coal has been the main fuel for Polish power plants and as the country is rich in it, this energy sector was well secured.

Polish authorities have made a few major steps towards energy security as this aspect of the national security is regarded as a priority. In 2017 Prime Minister Mateusz Morawiecki announced that within five years Poland will not be dependent on deliveries from Russia[9]. Such statements are rather overoptimistic but they clearly show how important the issue is. As

[9] *Morawiecki: w ciągu pięciu lat Polska będzie niezależna energetycznie*, serwis informacyjny CIRE 24, www.cire.pl, 09 July 2017, access: 10.09.2020.

for 2020, not only words have been said but also a few significant projects have been completed in order to break down Russian monopoly. The first was the construction of oil terminal in Gdańsk in the 1990s[10]. The facility has been operating since 2000 and supplies not only Polish but also German refineries through Druzhba pipeline. Thanks to the terminal, Poland is able to import oil from other suppliers if the supplies from Russia disrupt. There have also been attempts to increase production of crude oil from the Baltic Sea by a state-owned company Petrobaltic. However, extraction of Polish crude oil deposits can only meet a small fraction of national demand.

The necessity to diversify Polish natural gas imports became clear when Russian and German companies signed a contract to build Nord Stream sub-sea pipeline that would enable for supplying Western Europe with the omission of transit countries, including Poland in 2006. The same year Polish government decided to build Liquid Natural Gas terminal in Świnoujście. The terminal started to operate in 2016 and since this year Poland's energy security has increased significantly[11]. Further development of the terminal, as well as construction of additional storage facilities, are planned, improving Poland's situation even more. A liquefied natural gas floating storage and regasification terminal, similar to those in Lithuania, are planned to be constructed in the Gdańsk Bay within a few years, thus creating another connector to the Polish gas system[12].

Another major step towards complete energy security in terms of natural gas supplies is cooperation between Poland, Norway and Denmark that aims at construction of a pipeline that would supply Poland, Denmark and their neighbouring countries with Norwegian gas. The project is known under the name Baltic Pipe and receives strong support from the EU as it is recognised as a project of common interest for the member states. The completion of the project and possession of LNG terminal, along with domestic extraction will completely secure Polish natural gas needs and will strengthen Polish position in negotiations with Russia over future deals.

Nowadays, the main challenge for Polish energy sector is decarbonisation in order to comply with EU's climate policy. The issue is highly controversial as coal has always been regarded as Polish national treasure

[10] *Naftoport Sp. z o.o*, PERN, www.pern.pl, access: 13.09.2020.

[11] *Terminal LNG w Świnoujściu*, www.polskielng.pl, access: 7.09.2020.

[12] *GAZ-SYSTEM podpisał list intencyjny w sprawie realizacji programu budowy pływającego terminalu LNG (FSRU) w Zatoce Gdańskiej*, www.gaz-system.pl, access: 23.09.2020.

because for decades it has been a stable source of fuel for power plants. In addition to this, coal sector generates thousands of workplaces. That is why shift towards renewable energy sources cannot be very rapid because neither Polish society, nor economy is ready for revolution in this matter[13]. However, dispersed power production from various renewable energy sources, along with improved methods of storing energy will also guarantee energy security and provide high level of self-sufficiency. Poland is connected through high voltage electric power transmission lines with other countries[14] and more such lines are to be constructed in near future which will also has a positive impact on country's energy security.

It is worth mentioning one more aspect of Polish energy strategy. For many years it has been planned to supplement Polish power system with nuclear power plants. Such facilities would diversify sources of energy and increase Polish energy security. However, such investments, apart from arising environmental concerns, have fallen out of favour in the EU and no financial support would be received for such a project. Taking into account the enormous costs of a new nuclear power plant, it is unlikely that this kind of energy will be produced in Poland.

Case study 3: Belarus

Byelorussian Soviet Socialist Republic used to be an important element in the USSR's energy system, having on its territory two oil refineries and a few important pipelines, mainly: oil pipeline Druzhba and Yamal-Europe gas pipeline. The dissolution of the USSR was a major threat for newly formed Belarus as the country has scarce energy resources and has always depended on imports[15]. Knowing that there are important assets of gas and oil transfer infrastructure and that it would be extremely difficult to diversify energy resources suppliers due to geographic reasons, Alexander Lukashenko has applied a policy of tightening relations with Russia, thus providing low-cost supply of energy cariers for the country without engaging in expensive infrastructural projects. However, according to Wojciech

[13] P. Naimski, *Energy diversification strategy for Poland*, New York 2007, p. 3.

[14] *Plan rozwoju w zakresie zaspokojenia obecnego I przyszłego zapotrzebowania na energię elektryczną na lata 2021–2030*, PSE, Konstancin-Jeziorna 2020, p. 12.

[15] *Belarus energy profile*, IEA, www.iea.org, April 2020, access: 23.08.2020.

Kononczuk[16], since Vladimir Putin's election in 2000 Russia started to pursue a more pragmatic policy towards Belarus, using its energy leverage to demand stronger political loyalty and deeper integration from officials in Minsk. That has led to numerous disagreements in terms of volumes of gas and oil delivered and their prices which, in turn, were the consequences of periods of rising tensions between these two countries and deterioration of Belarusian economy unable to cover the Russian debt[17].

From the geo-political point of view, Belarus is in much worse situation than Poland or the Baltic States as it does not have access to any sea so imports from that direction are impossible. In addition to this, Ukraine, Poland, Latvia and Lithuania are also dependent on deliveries from Russia as well so imports from these directions, although possible, cannot be treated as safe and stable source of oil and gas, not mentioning high costs of purchases at market prices.

A major step towards national energy security was taken in 2007, when Alexander Lukashenko, after another dispute over gas prices with Gazprom, authorized the construction of a two-reactor nuclear plant. This very ambitious project is partly financed by Russian loans and is based on nuclear technology delivered by Russia. As for 2020 the Astravets Nuclear Power Plant is nearing completion and can be further developed to become a large, four-reactor facility. The project has raised international concern in terms of safety, especially from Lithuania and Ukraine, but it will definitely improve Belarusian energy security, although to a limited extent.

It seems that over years, Belarusian energy dependency on Russia has not decreased. What is more, Belarusian position as a transit country has also deteriorated the moment Nord Stream projects were initiated, because now Russia has the possibility to export gas to Germany with the omission of Belarus. The construction of Astravets Nuclear Power Plant is a major step towards energy self-sufficiency but one facility of that kind is not enough for full energy security and there is no money or support for building more. Nowadays, many countries have been attempting to have a high share of renewable energy sources in their energy mix, which is also a step towards energy security. In the case of Belarus such policy seems to be the

[16] W. Kononczuk, *Difficult "Ally": Belarus in Russia's Foreign Policy*, "Studies of the Centre for Eastern Studies" 2008, www.osw.waw.pl, p. 1–55.

[17] A. Leukavets, *Belarus–Russia Relations in 2017: Behind the Curtain of the Long-lasting Drama*, "Russian Analytical Digest" 2017, no. 206, p. 2–3.

most reasonable, but it requires substantial funding that weak Belarusian economy is unable to provide.

Analysis of the case studies and conclusion

The analysis shows two patterns of building energy security after the collapse of the Soviet Union by Central-European countries and in the face of dependence on Russia. In both cases the main aim is to provide feedstock for local oil refineries, secure supply of natural gas and cover national demand on electricity. The first model of building energy security, applied by Lithuania and Poland, bases on extensive infrastructural development, especially gas and oil terminals, as well as expansion and upgrade of pipelines to benefit fully from the new sea terminals and create interconnectors that facilitate imports. In the case of Poland, the country's main source of electric power is domestically exploited coal, which for years was believed to be an optimal solution. However, in the process of global decarbonisation, Poland is going to lose its stable, but non-ecological source of energy. It is going to be replaced mostly by renewable energy sources. The transformation will be long and costly but is going to strengthen Poland's energy security. In Lithuania, the issue of energy security in terms of power is more complicated than in Poland as the country is dependent on supplies from abroad. In this case, extensive investment in renewable energy sources will be the remedy to the problem. It is necessary to highlight that both Poland and Lithuania profit from their access to the open sea which gives them the opportunity to look for suppliers of gas and oil overseas. In addition to this, both countries have been successful in developing their economies and, along with substantial financial support from the European Union, are able to bear the expenses of large infrastructural projects in the energy sector. The role of EU funding is especially important in building energy interconnectors because it complies with the general energy security policy of the whole union[18].

Belarusian model of shaping energy security is totally different from Polish and Lithuanian. Having scarce resources of fossil fuels and no ac-

[18] J. Misiągiewicz, *Strategia bezpieczeństwa energetycznego Unii Europejskiej*, [in:] *Bezpieczeństwo energetyczne. Koncepcje, wyzwania, interesy*, ed. J. Gryz, A. Podraza, M. Ruszel, Warszawa 2020, p. 141.

cess to the sea, Belarusian authorities opted for building strategic partnership with Russia and guarantee not only stable, but also inexpensive supply of natural gas and oil. Being a transit country for Russian exports of energy carriers has been for Belarus an important source of money and strengthened the country's negotiation position. Despite several disputes with Russia over prices and volumes of supplies, it seems that this model of shaping energy security was for many years quite effective as it did not require much investment in energy projects. Nevertheless, gaining energy security through a partnership with Russia has deteriorated the national security of Belarus. Despite pursuing a very ambitious goal of building a nuclear plant, which was a desperate act of strengthening energy security, Belarus is fully dependent on supplies from Russia which has recently gained the ability to omit Belarus though Nord Stram (and soon Nord Stream 2) pipelines and export gas directly to Germany, weakening Belarusian monopoly on transit towards Western Europe. In addition to this, Belarusian economy is growing very slowly and the country is unable to bear financial costs of purchasing energy carriers in market prices. In these unfavorable circumstances it seems that Belarus has sacrificed its national security for energy stability, but this policy was short-sighted. The country did not seize the chance to build-up its economic potential and did not attempt to effectively find other directions of imports. The shift towards renewable energy sources is for numerous countries a real opportunity to strengthen energy security but poor state of Belarusian economy, along with unwillingness of the authorities to integrate with other countries of the region, means that Belarus is unlikely to even partly take advantage of it. To sum up, Polish and Lithuanian strategies of shaping energy security are rather successful, whereas Belarusian strategy must be assessed as ineffective.

Streszczenie

Kształtowanie bezpieczeństwa energetycznego przez państwa Europy Środkowo-Wschodniej na przykładzie Białorusi, Litwy i Polski

Bezpieczeństwo energetyczne państwa jest bezsprzecznie jednym z filarów bezpieczeństwa narodowego i ma fundamentalne znaczenie zarówno polityczne, jak i gospodarcze. Rozpad ZSRR w 1989 r. postawił szereg państw Europy Środkowo-Wschodniej w obliczu uzależnienia energetycznego od Rosji. Każde z nich rozpoczęło trudny i czasochłonny proces budowania bezpieczeństwa energetycz-

nego. Po ponad 30 latach trwania tego procesu warto dokonać analizy, jak kraje poradziły sobie z tym wyzwaniem oraz jaką strategię kształtowania bezpieczeństwa energetycznego przyjęły. Na potrzeby niniejszego artykułu dokonano analizy trzech krajów regionu: Polski, Litwy oraz Białorusi. Wybór był nieprzypadkowy, gdyż państwa te są zróżnicowane pod względem liczby ludności, potencjału ekonomicznego i sytuacji geopolitycznej. Realizują różne modele bezpieczeństwa energetycznego, co daje podstawę do oceny ich efektywności.

Abstract

Energy security is indisputably one of the pillars of national security and it is of paramount importance for both the political stability and the economy. Dissolution of the USSR in 1989 left many states in Central and Eastern Europe dependent on Russia in terms of energy. All of these countries commenced difficult and time-consuming process of building their own energy security. After more than thirty years since the beginning of this process it is worth analyzing how these countries have coped with this challenge and what strategies of shaping energy security have been applied. For the purpose of this article three countries were analyzed: Poland, Lithuania and Belarus. The selection of these three particular states is justified by the fact that they vary in terms of population, economic potential and geo-political situation. They have been implementing different models of energy security and this gives a solid base for assessment of their effectiveness.

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