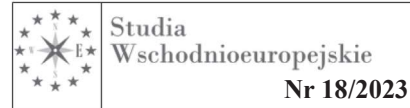


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DOI: 10.31971/24500267.18.5



## **Role of Azerbaijan in Maintaining Energy Security of Europe**

### **1. Azerbaijan – EU Transportation infrastructure**

#### **1.1. Overview**

Azerbaijan's infrastructure has traditionally been important in regional and international contexts. Baku, the capital of the country, historically had a pivotal location in the framework of various shipping routes from Asia to Europe. The Baku Port as a key transition point between Europe and Asia was opened in 1902. In 2018, the Port was completely renovated and, as a result, the “state-of-the-art new Baku International Sea Trade Port ferry terminal – capable of serving 150 metre-long, 10,000 tonne capacity ferries, having its cargo transportation capacity increased to 15 million tonnes and 500000 containers (TEU) per year – was opened at Alat, about 65 km south of Baku” (“The New Silk Road: Why advanced transport infrastructure is key to the future of Azerbaijan”, 2021).

The development of the port economy is closely connected with passing the Convention on the Legal Status of the Caspian Sea in August 2018 in Kazakhstan signed by Azerbaijan, Iran, Kazakhstan, Turkmenistan, and Russia. All this led to the development of maritime trade in the region, making Azerbaijan one of the main carriers on the Caspian Sea (Lekuh, 2018).

“Today the three international rail routes into Azerbaijan all converge at Alat, making the Port of Baku a major transportation hub between the west (Turkey and the EU), south (Iran and India) and north (Russia and Northern Europe). All direct transit rail transshipments between Azerbaijan and Europe or Central Asia are conducted via the port's ferry and general cargo terminals, where containers are transferred directly from ship to train and vice versa.” (“The New Silk Road: why advanced transport infrastructure is key to the future of Azerbaijan”, 2021).

Azerbaijan's road network also plays its role in the context of international businesses aimed at investments into the country and trade from Azerbaijan. By now, the latter has completed more than 50 major road construction and reconstruction projects in the past few years. "Thousands of kilometers of road have been created or renovated, linking and opening up the villages, towns and cities of Azerbaijan like never before. The country has also repaired or constructed more than 300 bridges and renewed all its main cross-border roads connecting the country with Georgia, Russia and Iran." ('The New Silk Road: Why advanced transport infrastructure is key to the future of Azerbaijan', 2021). The main purpose of all these infrastructure projects, which have been already completed and those which are still on, is to improve even further Azerbaijan's pivotal role in a capacity of one of the key Eurasian transportation hubs.

### **1.2. Baku-Tbilisi-Kars: the 21<sup>st</sup> century's Great Silk Road**

The railways system of Azerbaijan was first established in 1878 being now the largest in the South Caucasus and having in total over 2,944 km-long railroads ('The World Factbook' <https://www.cia.gov/the-world-factbook/countries/azerbaijan/#transportation>, 2022).

"An agreement on construction of the Baku-Tbilisi-Kars railroad was signed in Tbilisi (Georgia) on February 7, 2007, by the initiative of President of the Republic of Azerbaijan Ilham Aliyev. The groundbreaking ceremony of the railroad was held in Marabda (Georgia) in November of the same year. In July 2008, the inauguration ceremony of the Kars-Georgia border stretch of the railroad took place in Kars. A 504 km-long stretch of the railroad, which is 850 km in length, runs through the territory of Azerbaijan. A 263 km-long portion runs through Georgia, while a 79 km-long section through Turkey" ('Restoration of the Great Silk Road' <https://president.az/en/pages/view/azerbaijan/silkroad>, 2022).

The Baku-Tbilisi-Kars railway line (BTK) was commenced in 2017 with the purpose of maintaining railway connection between Azerbaijan, Turkey, and Georgia. Currently, it is used for commercial freight, at the same time being expected in the future to be used for international passenger transportation as well. The BTK replaced the previously operated Kars-Gyumri-Tbilisi railway line which was closed in 1993 because of the first Karabakh War. The BTK also maintains the additional route between China and Europe through Central Asia avoiding the territory of the Russian Federation.

In opinion of Onur Uysal, "The Baku-Tbilisi-Kars line will end up with strengthening economic relations between Azerbaijan, Georgia and Turkey. Reopening of Kars-Gyumri-Tbilisi line via Armenia will be almost unnecessary... Russia, investing a lot in China-Euro-

pe traffic, will surely watch the progress of project. Azerbaijan will have voice in Turkey-CIS countries traffic. Kazakhstan will be able to enrich its transit traffic from China which is one of the main targets of Kazakhstan Railways. Iran will face with rapid decrease in transit loads from Turkey to CIS countries which is surely against its targets of strengthening connections with neighbors” (‘Ten things to know about Baku-Tbilisi-Kars railway project’, 2014).

“Addressing opening ceremony at Caspian port city of Alat, the President of the Republic of Azerbaijan Ilham Aliyev said that BTK is the shortest and most reliable link between Europe and Asia and railways route will provide an alternative route to existing rail services carrying cargo from Asia (China) to Europe via Russia and Iran” (‘Baku-Tbilisi-Kars (BTK) railway track becomes operational to carry Chinese goods to Europe’, 2017).

Today the BTK “saves around 7,500 km of travel for goods shipping between China and Europe, reducing shipment times significantly as well as reducing fuel consumption and the environmental impact of each journey” (‘The New Silk Road: Why advanced transport infrastructure is key to the future of Azerbaijan’, 2021), decreasing transit time between China and Europe, which makes it more than twice faster than the sea route. The railroad, which contributes to stability and security, is expected to have an annual capacity of 5 million tons<sup>20</sup> of freight at the initial stage. The capacity will then reach 17 million tons and even more in the future. According to the indicators for 2020, 6,045 thousand containers were transported along the Baku-Tbilisi-Kars route in the first seven months (Guliyev R., 2018).

“The country’s massive investment in transportation infrastructure in recent years means that, whether it’s by land, sea, rail or air, Azerbaijan is well-connected and open for business!” (‘Azerbaijan is at the forefront of transport infrastructure across the region’, 2021)

The BTK project, constructed on the historic Great Silk Road, has special attractiveness for regional countries, providing easy access to the European and world markets for the Central Asian countries – Turkmenistan, Kazakhstan, Uzbekistan, Kyrgyzstan, and Tajikistan, as well as Afghanistan, thus, playing a crucial role in developing their trade relations while boosting and integrating their economies.

One of the main advantages of BTK project is that Azerbaijan gets a direct railway link with Turkey through the territory of Georgia. This, in turn, contributes to strengthening relations between the two states. Another advantage is that project stretches up to Nakhchivan Autonomous Republic. It is planned to build a separate railroad from Kars to Nakhchivan which will lift the Armenian blockade of the autonomous republic and ensure its transportation independence.

### **1.3. North-South Transport Corridor between Northern Europe and South Asia**

Azerbaijan also plays an active role in creating the North-South Transport Corridor in accordance with the “Strategic Road Map for Development of Logistics and Trade in the Republic of Azerbaijan”, approved by the Decree of the President of the Republic of Azerbaijan on December 6, 2016. This transforms the country into a key transport and logistics hub at the intersection of two transcontinental corridors at the center of Eurasia. The North-South Transport Corridor will link India, Pakistan, Iran, Azerbaijan, Russia, and Northern Europe.

Azerbaijan is the only country in the world, which has land borders with both Russia and Iran, and this geographic location is of crucial importance for trilateral regional cooperation.

The process of completion of works in connection with building the Azerbaijani section of the North-South Transport Corridor currently is in its final stage, with the section going from the Azerbaijan-Russia border to the Azerbaijan-Iran border being already ready for usage. Moreover, Azerbaijan, being one of the countries investing into construction of Astara-Rasht-Gazvin railroad in Iran, plans to grant a \$500 million loan to its southern neighbor for the construction of Astara-Rasht railroad with all its relevant logistics. As it is mentioned on the official site of the President of the Republic of Azerbaijan, “in accordance with the strategic road maps, Azerbaijan will get the following shares through increasing the volume of transit trade in the region until 2020: (i) 40% on the Central Asia and Black Sea route; (ii) 25% on the Central Asia and Europe route; (iii) 3% on the China and Europe route; (iv) 40% on the Russia and Iran route; (v) 25% on the Iran and Black Sea route. There are also plans to integrate the North-South and Baku-Tbilisi-Kars transport corridors. Azerbaijan is an active participant in both projects. This will benefit China, Kazakhstan, Central Asian countries, Azerbaijan, Georgia, Turkey and Europe” (‘Restoration of the Great Silk Road’, 2022).

## **2. Azerbaijan in the system of international transport corridors**

### **2.1. Current and planned energy projects with the participation of Azerbaijan**

Due to the fact that the oil and gas complex dominates in Azerbaijan, the main budget of the country is revenues from the export of hydrocarbons. Azerbaijan is facing the problem of economic diversification. As a result, transport is recognized as an alternative development industry in the state. In 2019, the speech of Azerbaijani President Ilham Aliyev during the visit of the forum in Davos confirms this. He mentioned the importance of creating a modern infrastructure, noting how appropriate it was to invest in it, which will lead to the

prosperity of Azerbaijan as one of the international hubs. Moreover, Azerbaijan is the only state of two transport corridors at once – North-South and East-West (Aliyev I., 2019).

Several international transport corridors have allowed Azerbaijan to achieve this. One of them is the Baku-Tbilisi-Kars railway which is an important link in the East-West transport corridor. According to the indicators for 2020, 6,045 thousand containers were transported along the Baku-Tbilisi-Kars route in the first seven months. The next transport corridor is the North-South part. The construction of the railway line runs from Astara (Azerbaijan) to Rasht (Iran) (Guliyev R., 2018).

Its function is to connect Northern Europe with South and Southeast Asia. The railways of Azerbaijan, Iran, and Russia are the intermediaries of implementation. There is a possibility that the Baku International Port in the village of Alat will be the largest in the Caspian region. It is planned that the number of containers per year will be up to one million.

The development of transport cooperation at the international level has become the main topic of the Baku leadership. In 2018, 9 out of 20 documents signed between Turkmenistan and Azerbaijan related to transport cooperation. Moreover, Ilham Aliyev discussed the development of the transport corridor not only with the President of India, but also with China. Special privileges are provided for Chinese goods passing through the territory of the Transcaucasian Republic. Thus, it underlines Azerbaijan's desire to become a major international transport player.

Of the three listed projects, the construction of the Baku–Tbilisi–Kars railway is considered the most successful. Basically, Turkey is interested in its construction. As part of this project, the Marmaray railway Tunnel was built under the Bosphorus Strait in Istanbul. All this unites links with the European railway network. Thus, the Baku-Tbilisi-Kars railway line becomes an East-West link. Turkey is also aware of the advantage of its transport and logistics capabilities. Its plans also include becoming the energy hub of Europe. It should be noted that Turkey carries out oil and gas exploration, in particular the Black Sea shelf and the operation of the Baku-Tbilisi-Ceyhan oil pipeline and the Southern Gas Corridor (Masumova, 2010).

The Azerbaijani state-owned company SOCAR is an investor in the Turkish economy, especially in the field of energy. In 2013, SOCAR Aviation began supplying aviation kerosene to Turkish airports. Currently, about 60% of Turkey's needs for it are provided by this company (Protsenko N., 2020).

All this suggests that not only Turkey influences Azerbaijan, but Azerbaijan also influences Turkey, and SOCAR is one of the key instruments of influence. Moreover, Turkey and

Azerbaijan are united by another common interest. It is the problem of the occupancy of the Southern Gas Corridor. Thus, Turkey intends to fill the deficit through projects between Azerbaijan and Turkmenistan.

Azerbaijan's influence is also expanding in Europe. Despite the fact that the EU has been successful not only in acquiring liquefied gas, but also in the construction of pipelines, there are certain areas of Europe where there is a shortage of options for natural gas supplies. This is especially true in Eastern and Central Europe. As a result, Europe is developing projects to gain energy independence. Europe plans to diversify natural gas supply routes to make a rapid transition from coal to gas, as there are countries that still depend on it.

The Southern Gas Corridor is one of the main sources of diversification of natural gas that is supplied to Europe from the Caspian region. The Southern Gas Corridor consists of three gas pipelines: the South Caucasus (Baku-Tbilisi-Erzurum), Trans-Anatolian, and Trans-Adriatic (TAP). The fuel route to the EU should be as follows: gas from the Azerbaijani Shah Deniz-2 field will reach Turkey, then part of it should pass along the 800-kilometer TAP, which will stretch from the Turkish-Greek border through the northern part of Greece, cross Albania and the Adriatic Sea and reach the shores of Italy. The planned initial capacity is 16 billion cubic meters annually, six of which will remain in Turkey. The cost of the entire project is estimated at \$40 billion.

Unlike the Russian Nord Stream-2, Brussels supported the project of delivering Caspian gas through Turkey to the EU. European Commissioner for Energy Maros Sefcovic called this pipeline an "important milestone" in creating a new energy route and strengthening the energy security of the European Union, including "the most vulnerable regions, such as Southeastern Europe and southern Italy." "We will all benefit from a bridge between the Caspian region and the EU market," Sefcovic said.

He sees the long-term goal of Brussels as the creation of a "pan-European energy market based on free trade, competition and diversified supplies, sources and routes." Due to the development of the Southern Gas Corridor, the European Union plans to achieve the goal of reducing dependence on the Russian concern Gazprom. But the political significance of the Southern Gas Corridor currently exceeds the economic one.

In addition, as a result of the escalation of the conflict between Russia and Ukraine, Europe decided to side with Ukraine and impose sanctions on Nord Stream-2. America also has plans to expand its energy power over the European region by supplying liquefied natural gas. Thus, the Southern Gas Corridor is a reasonable way out of dependence on America and Russia.

## **2.2. Risks and threats of projects**

Despite the successful development of Azerbaijan's energy sector, experts have their own opinion about the risks and threats:

Firstly, the depletion of the resource base is the main problem of the oil and gas industry. In addition, Azerbaijan faces the difficulty of exploring new offshore deposits located in the border areas. All this leads to the need to resolve issues through the delimitation of the Caspian Sea between Azerbaijan, Turkmenistan, Iran, and Kazakhstan. Next, the peak of oil production has been reached in the current century.

Secondly, due to the location of Azerbaijan's main hydrocarbon reserves in the Caspian Sea, offshore structures are subjected to a thorough search for oil and gas. Thus, according to experts, in the long term, the discovery of new deposits like Shah Deniz and Azeri-Chirag-Guneshli is unlikely. However, it is worth noting that the discovery of the Dostlug deposit has called into question the opinion of experts. This field had been a source of disputes until 2021 between Turkmenistan and Azerbaijan, as it is located on the border of the Caspian sectors.

Thirdly, oil production reached its maximum level already in the first decade of this century. After that, oil production began to decline. This is due to a reduction in the reserves of the Azeri-Chirag-Guneshli field. According to experts, the volume of liquid fuel extraction is expected to decrease by 2.5 – 3 times by 2030. As a result, the export potential of the industry may be reduced to a minimum, as Azerbaijan will be forced to abandon the export of liquid fuel in order to meet the growing domestic demand. Moreover, Azerbaijan is forced to fill the oil deficit through imports. All this will lead to the dependence of the state on external supplies.

Fourthly, according to experts' forecasts, at the beginning of the third decade, gas production may increase up to 40 billion cubic meters of gas per year. There is a possibility of maintaining the maximum production level for three years. However, after 2025, production will decrease by 5-10% (Matveev, 2017).

Fifthly, Azerbaijan has two difficult tasks to solve: to strengthen positions in the European market and develop cooperation with neighboring mining states such as Russia, Turkmenistan, Iran, and Kazakhstan.

Below we will give specific examples that will clarify the abovementioned points. According to the indicators of 2010, the Azeri-Chirag-Guneshli complex produced 823 thousand barrels per day. This figure has been the highest in the history of Azerbaijan's oil production since the collapse of the USSR. According to forecasts of that time, it was expected

to increase production to 1,000,000 barrels per day. Experts explained this by the commissioning of Western Chirag deposit. Despite this, after 2014, the forecasts were not destined to come true as not only oil production began to fall, but also commercial gas. Moreover, the volume of gas imports for 2017 amounted to 1.7 billion cubic meters. If we consider the eve of the pandemic, it is worth noting that in 2019, oil production was suspended on two Azeri –Chirag–Guneshli platforms. After that, experts predicted a decline in production rates to 10% per year. However, in the first quarter of 2020, production fell by 8.6%. Thus, quarantine could not be the reason for this (Tarasov, 2018).

In 2020, there were circumstances that forced Azerbaijan to reduce the pace of oil production. This was caused by the settlement of the issue of combating the decline in oil prices within the framework of the OPEC + deal. Thus, the pandemic was not the main cause. Thus, daily oil production was reduced by 22.8% in April 2020 compared to 2018 (May–June). In the period from July 1 to December 1, production was reduced by 18% compared to the level of 2018 (October). It is known that on September 27, 2020, the second Karabakh war began, which ended on November 9, 2020. However, during this period there was no significant impact on the energy system of Azerbaijan. Despite the attempts of the Armenians, the gas and oil transportation infrastructure of Azerbaijan was not affected. Thus, the current contracts for the supply of energy to Georgia, Belarus, and Ukraine were not affected. Moreover, the fighting lasted 44 days, which did not lead to a delay in the development of the gas transportation infrastructure. At the same time, the war is one of the factors that made us think about significant financial investments. The presence of valuable deposits in the depths of Karabakh was also actively discussed. Thus, non-ferrous metals (gold, molybdenum, etc.) are common in Karabakh. The subsoil of hydrocarbons was also discussed by various experts even before the war.

In 2016, Armenians predicted that the reserves of the Karabakh hydrocarbon province would amount to 300 million tons. They referred to forward estimates in the middle of the XX century. American experts claimed that there are 3 hydrocarbon oil and gas fields in the Araks Valley. According to their estimates, the projected oil reserve is 150 million tons, while gas is 250 billion cubic meters. Other experts also claim the presence of 7 fields, among which the projected oil reserve is 5 million tons, and gas – from 10 to 20 billion cubic meters. As a result of the Second Karabakh War, Azerbaijan could liberate these territories, thereby the presence of hydrocarbon reserves in Karabakh can attract foreign investment (Novikov, 2021).

One of the important tasks that Azerbaijan has to solve is the occupancy of energy projects like TANAP. As is known, Turkmenistan is the main partner for Azerbaijan, but



disagreements arose between them, which prevented full-fledged cooperation. Despite this, in January 2021, a memorandum on joint exploration and development of hydrocarbon resources of the Dostlug field in the Caspian Sea was signed and ratified between them. Hydrocarbon resources were distributed in the following proportions: 30% – owned by Azerbaijan, 70% – in favor of Turkmenistan, and transportation – through the energy transportation system of Azerbaijan. Thus, a compromise was reached between Ashgabat and Baku. The reasons that forced the two sides to come to a compromise are mutually beneficial interests. Azerbaijan is interested in expanding the resource base of the Southern Gas Corridor. Turkmenistan, on the other hand, faces the problem of a shortage of access to gas markets due to China's lack of desire to supply Turkmen gas additionally. China does not want to depend on one of the suppliers, so it decided to diversify it.

#### **Conclusion: Azerbaijan as an international transport hub**

With the purpose of turning Azerbaijan into one of the pivotal Eurasian transport hubs, the government of the country invests into, and works over the (i) development of economic, trade, transport and logistic relations between European, Black Sea, Caucasus, Caspian, and Central Asian regions; (ii) development of the shortest multimodal land corridors between China and the EU, (iii) creation of the North-South Transport Corridor; (iv) attraction of transit cargo as part of the Great Silk Road; (v) considerable improvement of logistic and trade infrastructure and Azerbaijan's transformation into an even more attractive hub in this area through the regulatory stimulus; (vi) digitalization of the Great Silk Road through Azerbaijan's Digital Transport Network and TASIM projects; (vii) coordination of relations between different transport areas; (viii) coordinated policy concerning international and domestic tariffs on cargo and passenger transportation; (ix) development of the coordinated activity programs on the organization of multimodal transportation.

In addition to the aforementioned points, Azerbaijan also invests into construction of new international airports and roads across the country. Playing one of the leading roles in regional projects and being an integral component of the Eurasian logistics, Azerbaijan contributes to the development of domestic transport infrastructure pursuing the goal of transforming the country into one of the key continental transport hubs (Restoration of the Great Silk Road, 2022).

### **Streszczenie**

Artykuł porusza kwestie związane z rolą Azerbejdżanu w utrzymaniu bezpieczeństwa energetycznego Europy. Artykuł zawiera również analizę systemu transportowego Azerbejdżanu i jego połączeń z trasami międzynarodowymi. Kwestie związane z Baku-Tbilisi-Kars (Wielki Jedwabny Szlak XXI wieku) i korytarzem transportowym Północ-Południe między Europą Północną a Azją Południową są w nim szczegółowo omówione. Druga część artykułu poświęcona jest miejscu zajmowanemu przez Azerbejdżan w systemie międzynarodowych korytarzy transportowych, w tym bieżących i planowanych projektach energetycznych z udziałem Azerbejdżanu oraz możliwym zagrożeniom i zagrożeniom dla tych projektów.

### **Słowa kluczowe:**

Azerbejdżan, Bezpieczeństwo energetyczne, Europa, Infrastruktura transportowa, Wielki Jedwabny Szlak, Korytarz Transportowy Północ-Południe

### **Key words:**

Azerbaijan, Energy security, Europe, Transportation infrastructure, Great Silk Road, North-South Transport Corridor

### **Bibliography**

1. Aliyev I., 2019, Ilham Aliyev: Azerbaijan has a strategy for investing in infrastructure and the real economy ([https://vestikavkaza.ru/news/Ilkham-Aliyev-u-Azerbaydzhana-est-strategiya-po-investirovaniyu-v-infrastrukturu-i-realnyu-ekonomiku.html?utm\\_source=cp](https://vestikavkaza.ru/news/Ilkham-Aliyev-u-Azerbaydzhana-est-strategiya-po-investirovaniyu-v-infrastrukturu-i-realnyu-ekonomiku.html?utm_source=cp))
2. Azerbaijan is at the forefront of transport infrastructure across the region, 2021. (<https://apa.az/en/xeber/infrastructure/bbc-azerbaijan-is-at-the-forefront-of-transport-infrastructure-across-the-region-358073>)
3. Baku-Tbilisi-Kars (BTK) railway track becomes operational to carry Chinese goods to Europe, 2017. (<https://dnd.com.pk/btk-railway-track-becomes-operational-to-carry-chinese-goods-to-europe/134952>).
4. Guliyev R., 2018, Azerbaijan has become a transport hub. (<https://news.day.az/economy/985544.html>)
5. Lekuh, 2018. The main thing in the Caspian Convention. (<https://ru.sputnik.kz/20180814/glavnoe-kaspijskaya-konvenciya-6821799.html>)
6. Masumova N. R., 2010, Modernization of the fuel and energy complex and energy strategy of Turkey.
7. Matveev I. E., 2017, Energy of Azerbaijan. Problems and prospects of the energy sector of the Republic of Azerbaijan. (<http://matveev-igor.ru/articles/366227>)
8. Novikov, 2021, Geopolitical and economic factors of the development of the energy sector of Azerbaijan and Turkey
9. Protsenko N., 2020. Azerbaijan in the oil trap: a new crisis with a small barrel is inevitable, (<https://easaily.com/ru/news/2020/03/13/azerbaydzhan-v-neftyanyov-lovushkenovyy-krizis-pri-slabom-barrele-neizbezhen>)

10. Restoration of the Great Silk Road. Site of the President of the Republic of Azerbaijan, 2022. (<https://president.az/en/pages/view/azerbaijan/silkroad>).
11. Tarasov S., 2018. ExxonMobil and Chevron are leaving Azerbaijan (<https://regnum.ru/news/polit/2531674.html>)
12. The New Silk Road: why advanced transport infrastructure is key to the future of Azerbaijan, 2021 (<https://www.bbc.com/storyworks/azerbaijan-the-opportunity-awaits/transport-and-infrastructure>).
13. The World Factbook, 2022 (<https://www.cia.gov/the-world-factbook/countries/azerbaijan/#transportation>)
14. Uysal O., 2014, Ten things to know about Baku-Tbilisi-Kars railway project. (<https://railturkey.org/2014/10/20/baku-tbilisi-kars-railway/>)