

**THE ROLE OF CASPIAN HYDROCARBON RESERVES IN
AZERBAIJAN'S ENERGY PROJECTS
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Abstract: *the article examines the influence of hydrocarbon reserves of the Caspian countries on the diversification of industry and the role of energy projects in Azerbaijan. Here, on the basis of statistical sources, the potential of natural gas in the Caspian countries, the level of profitability of pipeline transport in the Republic of Azerbaijan was analyzed and estimated. The article also explores the role of Azerbaijan's energy projects in ensuring the energy security of the EU countries due to the optimal exploitation of hydrocarbon reserves of the Caspian countries.*

Keywords: *globalization, energy project, pipeline, hydrocarbons, export, industry, level of profitability, balanced trade.*

**РОЛЬ КАСПИЙСКИХ ЗАПАСОВ УГЛЕВОДОРОДА В
ЭНЕРГЕТИЧЕСКИХ ПРОЕКТАХ АЗЕРБАЙДЖАНА
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Аннотация: *в статье рассматривается оценка влияния запасов углеводородов прикаспийских стран на диверсификацию промышленности и роль энергетических проектов Азербайджана. Здесь на основе статистических источников был проанализирован и оценен потенциал природного газа в прикаспийских странах, уровень рентабельности трубопроводного транспорта в Азербайджанской Республике. В статье также исследуется роль энергетических проектов Азербайджана в обеспечении энергетической безопасности стран Евросоюза за счет оптимальной эксплуатации запасов углеводородов прикаспийских стран.*

Ключевые слова: *глобализация, энергетический проект, трубопровод, углеводороды, экспорт, промышленность, уровень рентабельности, сбалансированная торговля.*

Introduction. In the conditions of the globalization of the world economy, the creation of new forms of economic management, the increase in the diversification of industries causes an increase in the export potential of countries rich in hydrocarbon reserves, especially the Caspian countries, and has a positive effect on the development of various industries [1,3]. The development of the oil and gas sector, which is the basis of the export of the Republic of Azerbaijan, led to positive changes in the structure of foreign trade turnover and created conditions for the creation of a balanced foreign trade ratio due to high demand for work and services in the non-oil sector. This caused the specialization of non-oil sector enterprises in Azerbaijan on new types of production. Since the formation of the assortment is the main strategy of production and sale of production of each enterprise, which conducts a more flexible assortment of production, they get a superior position in the competitive environment [2].

Main part. Diversification of industry due to the optimal utilization of hydrocarbon reserves of the Caspian countries has recently increased the rate of industrialization of the Republic of Azerbaijan, in the conditions of a new stage of development of the country's industry, and has become a guarantor of the success of our country's industrialization policy. Since 2003, one of the main directions of improving the regional structure of the industry has been aimed at increasing foreign exchange earnings thanks to energy exports [4].

It should be noted that along with the development of traditional production areas, the commissioning of new production areas has reduced the dependence on imports of food products and construction materials in the non-oil sector. The commissioning of the Caspian hydrocarbon transportation routes, the implementation of infrastructure projects along the transport corridors, along with the Caspian countries, have turned Azerbaijan into a key partner country in ensuring Europe's energy security. The pipeline, included in the unified transport system, plays an important role in the export of crude oil and natural gas compared to other types of transport, and is one of the main areas with a high level of profitability. since it is high compared to the income, economic activity on pipeline cargo transportation resulted in losses, which resulted in a decrease in the profitability level of transportation [3]. But bwtwn, despite this, the profitability level of the pipeline in the later periods, including cargo transportation, developed with increasing dynamics, except for the years 1998-2000 and 2006, and in 2020 it was 464.2%. which is quite high compared to other types of transport in the unified transport system. It should be noted that the Caspian littoral countries, which have a large oil and gas potential to carry out export activities, account for 46% of the world's gas reserves. These can be seen more clearly from the diagram below [5].

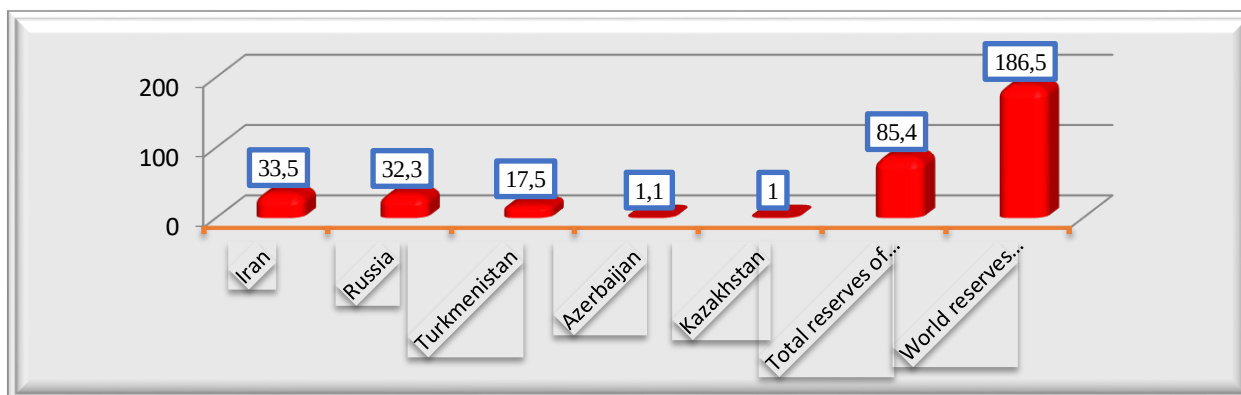


Fig. 1. Total reserves of natural gas in the Caspian countries, trln. m3
Source: Prepared by the author based on data from the BP Statistical Review of World Energy

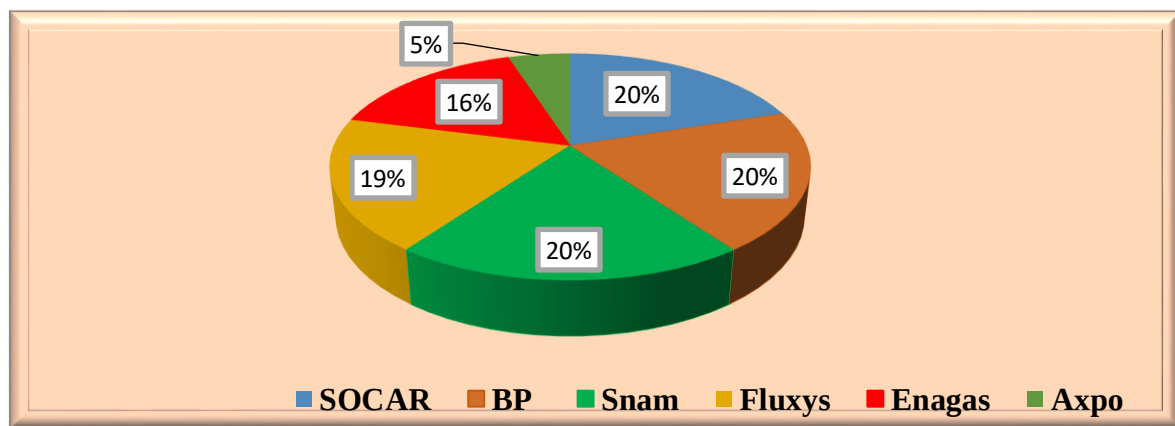
As can be seen from the graphic data, the natural gas potential of the Caspian countries is high compared to other countries: 33.5 trillion m³ in the Islamic Republic of Iran and 32.3 trillion m³ in Russia. Azerbaijan's natural gas potential is 1.1 trillion m³, which is 1.3% of the total natural gas potential of the Caspian countries. According to the schedule, since the bulk of gas production comes from Iran, Russia and Turkmenistan, it is expected that the volume of gas exports in Azerbaijan and Kazakhstan will decrease in the prospective period.

There are many oil and gas fields in the Caspian Sea of the Republic of Azerbaijan, the largest of which are the Azeri-Chirag-Guneshli block of oil and gas fields with proven gas reserves of 350 billion cubic meters and Shah Deniz. The gas field with reserves of 1.2 trillion cubic meters of gas is a condensate field. Gas reserves are available at the fields "Absheron" (350 billion cubic meters), "Umid" (200 billion cubic meters) and the promising structure Babek (400 billion cubic meters). In the gas sector, great hopes are also placed on such Azerbaijani fields as Nakhchivan, Zafar-Mashal, Shafak-Asiman. All this allowed the republic to start implementing the Southern Gas Corridor project to Europe. Currently, seven countries are participating in them - Azerbaijan, Georgia, Turkey, Greece, Bulgaria, Albania and Italy. Three more Balkan countries joined this project - Bosnia and Herzegovina, Croatia [2].

The Southern Gas Corridor is represented by several gas pipelines from the Shah Deniz field. It should be noted that all segments of the Southern Gas Corridor are important energy infrastructure projects that open up new opportunities for the export of natural gas to European energy markets not only for Azerbaijan, but also for the Caspian region. In 2007, the Baku-Tbilisi-Erzurum gas pipeline was put into operation, through which gas is exported to Georgia, Turkey and Greece (South

Caucasus gas pipeline). In 2018, the Trans-Anatolian Gas Pipeline (TANAP) was put into operation. And in 2020, it is planned to complete the construction of the Trans Adriatic Gas Pipeline (TAP) - a route from the Turkish border through Greece, Albania and the Adriatic Sea to southern Italy. It should be noted that this gas pipeline is a project that provides for the transportation of natural export gas, produced in the part of the Caspian Sea belonging to the Azerbaijani sector, from Greece to Albania and through the Adriatic Sea to Italy and, finally, to Western Europe. The project mainly envisages the transportation of 10 billion cubic meters of gas produced as part of the Shahdeniz-2 project to Europe via the TAP pipeline, which means providing gas to 7 million families and ensuring energy security in Europe. The three main investors of the project are BP, Italian SNAM and Azerbaijani SOCAR, each of which has 20% in the project. This project, announced by the Swiss EGL Group in 2003, was officially announced by the Shah-Deniz consortium on June 28, 2013. [2]. The foundation laying ceremony took place on May 17, 2016 in Thessaloniki, Greece, the cost of the project was 4.5 billion dollars. The TAP pipeline with EUR was estimated as a new interregional export gas pipeline, providing for the supply of Azerbaijani gas to European consumers in 2020 [5]. The pipeline will supply 8 billion cubic meters of gas per year to Italy, and the remaining 2 billion cubic meters of gas to Greece and Bulgaria.

The main shareholders of TAP are Azerbaijan, BP and Italy. The share of TAP shareholders is shown in the diagram below.



*Fig. 1. The share of shareholders in pollution under the TAP project, in %
Source. It was developed by the author on the basis of data (5)*

As you can see from the diagram, British BP, Azerbaijani SOCAR and Italian Snam each have 20% in the TAP project, which is 60% of the entire project. 40% of the project is owned by Belgian Fluxys (19%), Spanish Enagas (16%) and Swiss

Axpo (5%). The TAP project became a reality thanks to the cooperation of companies participating in this project.

Apparently, TAP is a mega-energy project with the participation of several countries, international energy companies, and financial institutions such as ABR, EBRD and AVI. The TAP project became a reality thanks to the cooperation of all involved companies. Despite the global pandemic of COVID-19 and the protracted Nagorno-Karabakh war in our country, on November 15, 2020, Azerbaijan completed the TAR project and began commercial operations, supplying the first Azerbaijani gas to European consumers.

It should be noted that all segments of the TAP project are important energy infrastructure projects that open up new opportunities for exporting natural gas to European energy markets not only for Azerbaijan, but also for the Caspian region.

The pipeline starts in Kipoi on the Turkish-Greek border, connects Greece, Albania and ends at the destination in the southern part of Italy. The initial throughput capacity of the gas pipeline is 10 billion cubic meters of gas, and further expansion will allow to increase the throughput capacity of the gas pipeline up to 20 billion cubic meters per year [2].

The discussion of all important aspects and tasks of the megaproject between the participating parties played a special role in the implementation of the project in the Consultative Council of the Southern Gas Corridor, created by the President of the Republic of Azerbaijan in order to effectively implement all measures related to the transportation of Azerbaijani natural gas to Europe via the Southern Gas Corridor. The Consultative Council of the Southern Gas Corridor held in Baku on February 28, 2020 with the participation of many countries, energy companies and financial institutions also played an important role in the development of future cooperation between the participating countries. The European Union, which is interested in the supply of natural gas from the Caspian region as a consumer, as well as the Turkmenistan-EU energy discussions have determined the prospective opportunities of this project in the Advisory Council of the Southern Gas Corridor. All this determines that the TAR project has a strategic importance for the entire Eurasian continent. In October 2020, the TAP was filled with natural gas from the Greek-Turkish border to the gas pipeline's receiving terminal in southern Italy. On November 15, 2020, the commercial operation of the gas transmission system through Greece, Albania, the Adriatic Sea and Italy began, which will be the first supply of natural gas to Europe under the Shah Deniz-2 project.

Studies show that the TAP project has increased the geopolitical power of our country by expanding economic, political and security cooperation between Azerbaijan and Turkey, and also played an important role in strengthening relations with European partners.

From a geopolitical point of view, TAP is the first gas pipeline through which Caspian gas will be delivered to Europe. Given the volatility of the oil markets, it is very important that the country is a net exporter of gas. In addition to demonstrating cooperation and integration between TAP Azerbaijan, Turkey and European countries, the gas pipeline makes a great contribution to the economic, political and energy security of all participating countries.

It should be noted that the implementation of TAP is very important for Turkey. Thus, the Turkish part of the TAP - the Trans-Anatolian gas pipeline (TANAP) - provides for the diversification of Turkey's gas sources. 6.3 billion cubic meters of natural gas was supplied to the TAP Turkish gas market in January-July 2020, and according to 2020 statistics, Azerbaijan ranks first in the Turkish gas market with 23.45% of the country's gas supplies[5] .

The result. As a result of the study, it was established that the optimal export of hydrocarbon reserves of the Caspian countries makes Azerbaijan, along with the Caspian countries, a reliable partner in ensuring the energy security of Europe, and causes the diversification of our country's industry. Studies show that Turkey has become an energy hub to support the energy security of the EU as one of the main participants of TAP, while reducing its dependence on high gas supply due to the use of Azerbaijani gas.

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