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ENERGY POLICY AND ENERGY PROJECTS

ENERGY POLICIES IN THE SOUTHERN CAUCASUS

Larisa ALEKSANYAN

Research Associate,
Department of Political Science and Political Philosophy,
Diplomatic Academy of the Ministry of Foreign Affairs of Russia
(Moscow, Russian Federation)

Svetlana GAVRILOVA

Ph.D. (Hist.), Senior Lecturer,
Department of Political Science and Political Philosophy,
Diplomatic Academy of the Ministry of Foreign Affairs of Russia
(Moscow, Russian Federation)

ABSTRACT

The Southern Caucasus continues to be a major focus of attention. Its unique geographical location and geopolitical importance are enhanced by its substantial hydrocarbon reserves. A key role in the region's energy sector is played by Azerbaijan, which has achieved significant successes. Pipeline projects implemented in the early 21st century have enabled Azerbaijan to become an exporter of Caspian oil and gas to the European market. Western energy companies and government structures have played a major part in this process, providing financial assistance and political support for the new pipeline projects. Their involvement in creating alternative routes for oil and gas transportation from the Caspian region has increased the role of Georgia,

since export pipelines run through its territory. At the same time, Armenia was excluded from the discussion of energy projects owing to political factors. The Nagorno-Karabakh conflict and close relations with Russia in the 1990s became an obstacle to its participation in new pipeline projects.

In the last decade, the energy situation in the Southern Caucasus has changed radically. The implementation of pipeline projects initiated by Western countries has strengthened the position of Azerbaijan and Georgia, creating conditions for the development of new projects. At the same time, Baku is no longer oriented only towards Western countries, but has expanded its cooperation with Turkey. The energy factor has played a key role in strengthening the Turkish-Azerbaijani tandem, paving the way for its expansion to include Georgia. This triple alliance, in which Turkey holds the leading position, has allowed Ankara to significantly expand its presence in the Southern Caucasus and to increase its influence on the political, economic, and cultural development of Azerbaijan and Georgia.

New pipeline projects involving Azerbaijan, Georgia, and Turkey are to be implemented in the next few years. This will open a new page in the energy history of the Southern Caucasus. However, it should be emphasized that in recent years Azerbaijan has met with some difficulties in oil and gas production. This fact rules out the possibility of stronger competition between Russia and Azerbaijan for the European market in the coming years. Nevertheless, the sphere of oil and gas production and export in the Southern Caucasus will have a crucial effect on the development of the region, so that it will remain a focus of attention in the foreign policy of non-regional states.

KEYWORDS: ***the Southern Caucasus, energy, pipelines, oil, gas.***

Introduction

In the last quarter-century, the South Caucasian countries have been involved in energy projects associated with the production and export of hydrocarbons to external markets. The greatest attention has been paid to Azerbaijan, which has historically played a key role in oil production. Azerbaijan's significant oil reserves, its newly discovered gas fields, and its advantageous geographical location have aroused the interest of the world's leading oil and gas companies and Western states, which have supported the creation of a new pipeline infrastructure.[1]

Georgia, along with Azerbaijan, has played an important role in the new projects for the production of hydrocarbons and their supply to external markets. The interest shown by the new Georgian authorities in expanding cooperation with the United States and the European Union allowed Tbilisi to occupy an important place in the new pipeline projects. Georgia's development strategy provided for the construction of oil and gas export pipelines, which offered additional opportunities for attracting foreign investment and increasing budget revenues.[2] In this matter, Georgia got the edge over Armenia despite a surge of interest in the latter after independence because of its proximity to the oil and gas resources of the Caspian region. Moreover, Armenia was once seen as a potential transit

[1] See: S.S. Zhiltsov, "Russia's Policy towards the Pipeline Transport in the Caspian Region: Results and Prospects," in: *The Handbook of Environmental Chemistry*, Vol. 51, 2016, pp. 85-94.

[2] See: I.V. Prokofiev, "Toplivno-energeticheskii kompleks," in: *Gruzia: problemy i perspektivy razvitiia*, in two vols., Vol. 1, ed. by E.M. Kozhokin, Russian Institute for Strategic Studies, Moscow, 2001, pp. 38-39.

country for oil and gas exports to the West.[3] But Erevan's continued close political and economic relations with Russia and the conflict with Azerbaijan finally led to Armenia's exclusion from future pipeline projects, especially since Turkey and Azerbaijan were categorically against the use of Armenian territory as this implied, among other things, routes through Nagorno-Karabakh.[4] Finally, there was the Turkish factor. Turkey, Azerbaijan's nearest neighbor, was an attractive potential buyer of Azerbaijani natural gas.[5] The coinciding interests of Azerbaijan, Turkey, and Western states, including the U.S., which did not want the future oil and gas flows to pass through Russian territory, led to the development and implementation of pipeline projects such as the Baku-Tbilisi-Ceyhan (BTC) oil pipeline and the Baku-Tbilisi-Erzurum (BTE or Southern Caucasus) gas pipeline. They have had a great impact on Azerbaijan's energy policy, fueling interest in a further increase in oil and gas production.[6] At the same time, the creation of new energy infrastructure has done nothing to normalize relations between the South Caucasian countries.

The Energy Strategy of Azerbaijan

After the breakup of the U.S.S.R., Azerbaijan was able to pursue its own foreign policy, particularly to develop an energy strategy based on its own national interests.[7] In the early 1990s, the country's leaders pinned their hopes on oil production. The establishment of the State Oil Company of the Azerbaijan Republic (SOCAR) in September 1992 was followed by the development, under the direction of President Heydar Aliyev, of a national oil strategy[8] that provided for an increase in oil production and oil exports to the European market. In the context of this approach, special mention was made of the need for cooperation with major Western oil companies, because Azerbaijan had no industrial base for offshore oil production. In implementing this oil strategy, the republic's authorities sought to achieve key objectives such as strengthening Azerbaijan's position in the South Caucasian region, resolving the Karabakh conflict, developing the economy, and finding a place for the country in the global oil market.

The Western countries in turn showed a greater interest in Azerbaijan as an additional source of raw materials and an alternative to Russian supplies. The West was also interested in Azerbaijan's transit potential for the transportation of energy resources from Central Asia to Europe bypassing Russia. The Western approach was reflected in the assessments of Zbigniew Brzezinski, who wrote that Azerbaijan's location makes it the region's "geopolitical pivot," describing it as "the vitally important 'cork' controlling access to the 'bottle' that contains the riches of the Caspian Sea basin and Central Asia."[9]

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[3] See: V.P. Vasyutovich, "Mesto Armenii v geopolitike SShA," in: *Armenia: problemy nezavisimogo razvitiia*, ed. by E.M. Kozhokin, Russian Institute for Strategic Studies, Moscow, 1998, pp. 370-371.

[4] See: S.S. Zhiltsov, I.S. Zonn, A.M. Ushkov, *Geopolitika Kaspiiskogo regiona*, Mezhdunarodnye otnosheniia, Moscow, 2003, p. 123.

[5] See: A.A. Kurtov, "Kaspiiski spor: otnosheniia Azerbaidzhana s Turkmenistanom," in: *Nezavisimyi Azerbaidzhan: novye oriyentiry*, in two vols., Vol. 2, ed. by E.M. Kozhokin, Russian Institute for Strategic Studies, Moscow, 2001, pp. 76-77.

[6] See: S.S. Zhiltsov, I.S. Zonn, *Kaspiiskaia truboprovodnaia geopolitika. Sostoianie i realizatsiia*, Vostok-Zapad, Moscow, 2011, 317 pp.

[7] See: S. Zhiltsov, D. Slisovskiy, N. Shulenina, E. Bazhanov, "Azerbaijan's Energy Policy: Results, Problems, Prospects," *Central Asia and the Caucasus*, Vol. 18, Issue 4, 2017, p. 20.

[8] See: "Azərbaycanın neft strategiyası (The Oil Strategy of Azerbaijan)," Heydər Əliyev İrsini Araşdırma Mərkəzi (Heydar Aliyev Heritage Research Center), available at [http://aliyevheritage.org/az/oilstrategy.html], 28 December, 2018.

[9] Z. Brzezinski, *The Grand Chessboard. American Primacy and Its Geostrategic Imperatives*, Washington, D.C., 1997, p. 129.

Long negotiations between Azerbaijan and 12 large oil companies led to the signing on 20 September, 1994, of a production sharing agreement for the development of three oil fields: Azeri, Chirag, and Gunashli. The agreement, which became known as "the contract of the century," determined the role of the oil factor in Azerbaijan's foreign policy. The Baku authorities came to regard oil as a foreign policy tool and an instrument for improving the country's economic position. After the signing of the agreement, the leaders of Azerbaijan expected an increase in oil production and implementation of pipeline projects. But the lack of information on construction schedules for the new pipelines induced them to sign a contract with Russia on the transportation of Azerbaijani oil through the Baku-Novorossiysk pipeline.[10] The document was signed in January 1996. Simultaneously, Azerbaijan was looking for alternative export routes. As a result, in March 1996 Azerbaijan signed an agreement with Georgia on the transportation of Azerbaijani oil through a pipeline that would run from Baku through Tbilisi to the Supsa terminal in Georgia. The Baku-Supsa pipeline, commissioned in 1999, was the first step in diversifying transportation routes for Azerbaijani oil. This enabled the republic to increase budget revenues. It also established an extra-budgetary fund, the State Oil Fund of Azerbaijan (SOFAZ), to accumulate part of the oil revenues.[11] Subsequently, in November 1999, Azerbaijan signed an intergovernmental agreement with Turkey and Georgia on the construction of another pipeline, the Baku-Tbilisi-Ceyhan (BTC) oil pipeline. Construction began in April 2003, and the Azerbaijani section of the pipeline was already inaugurated at the Sangachal terminal in May 2005;[12] the whole 1,776-kilometer-long BTC pipeline was put into operation in July 2006.

From a geopolitical perspective, the main purpose of this pipeline project, which was the result of joint efforts by the United States and the European Union, was to create a route for transporting oil from the Caspian region to the world market independently of Russia, thus reducing Russian influence. Owing to the pipeline, Azerbaijan has diversified its oil transportation routes. Allied relations with Turkey, which opposes a union of Russia, Armenia, and Iran,[13] are also of great importance to Azerbaijan.

The BTC's capacity is 50m tons of oil per year (1 million barrels per day). However, it has been operating below capacity. In 2016, the BTC transported only 28.8m tons of Azerbaijani oil, because oil production in the country has been steadily declining since 2011 (see Fig. 1).

In 2017, oil production totaled 39.2m tons, down 5.2% from 2016. This trend continued in 2018 and, according to the International Monetary Fund, will continue in the future.[14] The main reason is the depletion of oil reserves of the Azeri-Chirag-Gunashli fields. This situation has led to a decline in the economic efficiency of the BTC pipeline. As for the Western companies, their interest in the project and their investments have declined accordingly. Overall, Azerbaijan's oil sector accounts for almost 60% of GDP, which makes its economy dependent on external demand and oil prices. The country's vulnerability was confirmed by the global financial crisis of 2008-2009. As a result of a significant fall in demand and world oil prices, Azerbaijan recorded a sharp drop in foreign trade (see Fig. 2).

In the last decade as a whole, the volume of the country's foreign trade decreased 2.6-fold, including exports 3.2-fold. Such a trend has been observed in recent years owing to the decline in world

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[10] See: S. Zhiltsov, D. Slisovskiy, N. Shulenina, E. Bazhanov, op. cit., p. 24.

[11] See: "Azerbaijan Republic: Selected Issues and Statistical Appendix," IMF Country Report, May 2003, No. 3/130, p. 11.

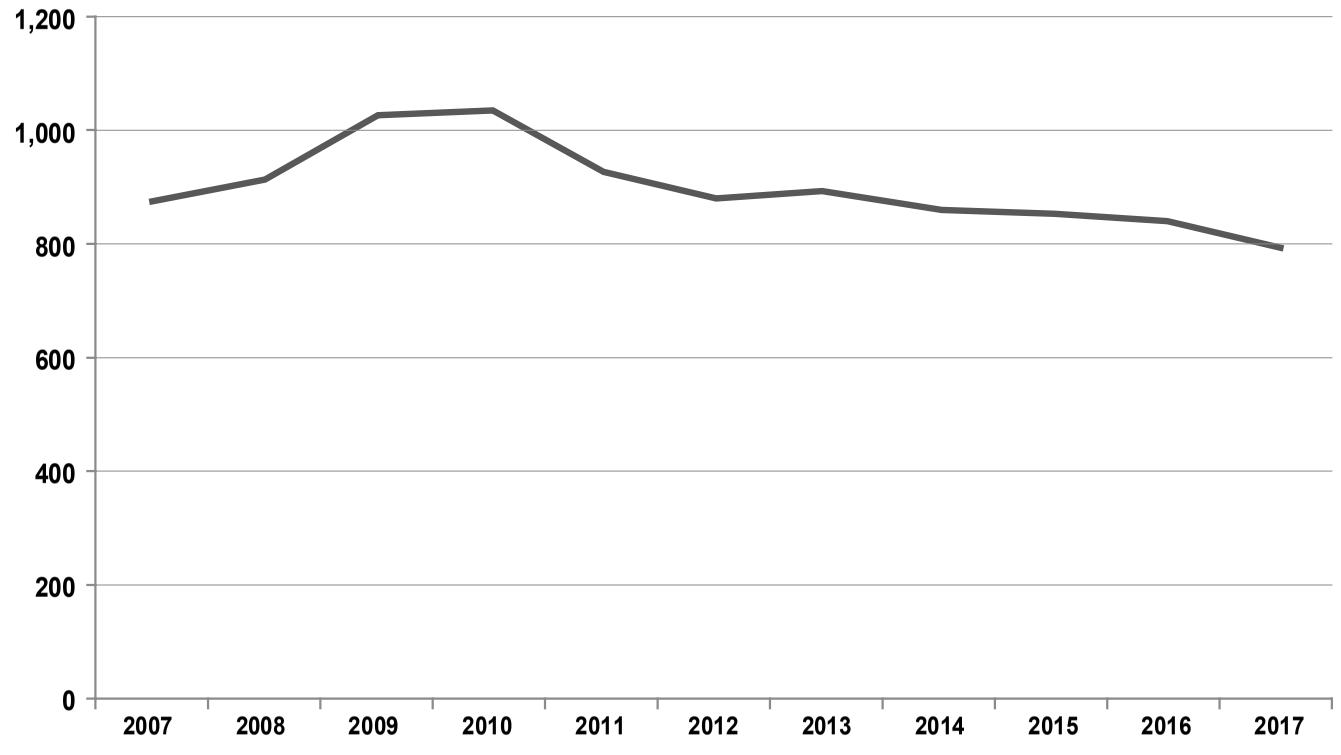
[12] See: A. Guryev, *Geopoliticheskiy rakurs nefteprovoda Baku-Tbilisi-Dzheikhan*, Institute of the Middle East, 19 June, 2005, available at [http://www.iimes.ru/rus/stat/2005/19-06-05.htm], 27 August, 2018.

[13] See: *V ozhidanii buri: Yuzhnyi Kavkaz*, ed. by K.V. Makiyenko, Center for Analysis of Strategies and Technologies (CAST), Moscow, 2018, 200 pp.

[14] See: *Republic of Azerbaijan: 2016 Article IV Consultation—Press Release*; Staff Report; and Informational Annex, IMF Country Report, No. 16/296, September 2016, p. 4.

Figure 1

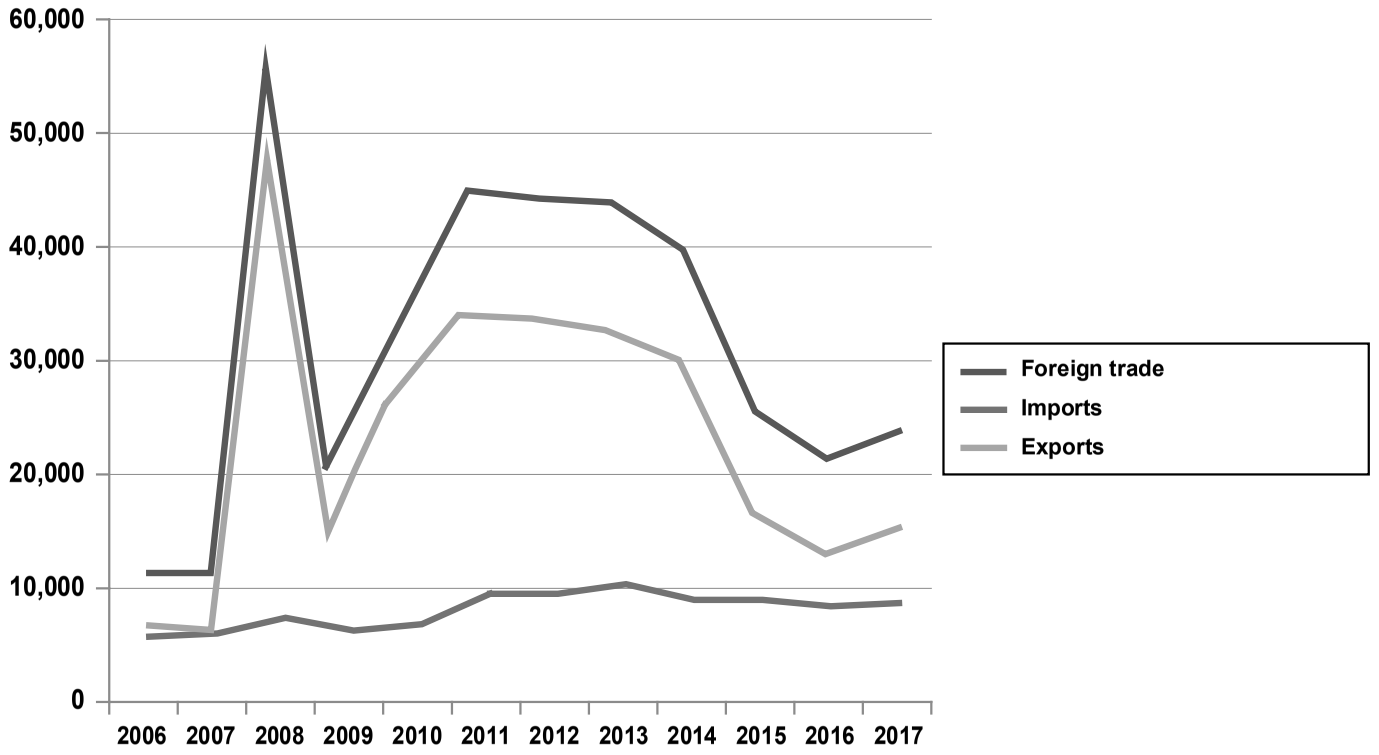
Azerbaijan: Oil Production in 2007-2017
(*in thousands of barrels per day*)



Source: Compiled by the authors based on data from BP.

Figure 2

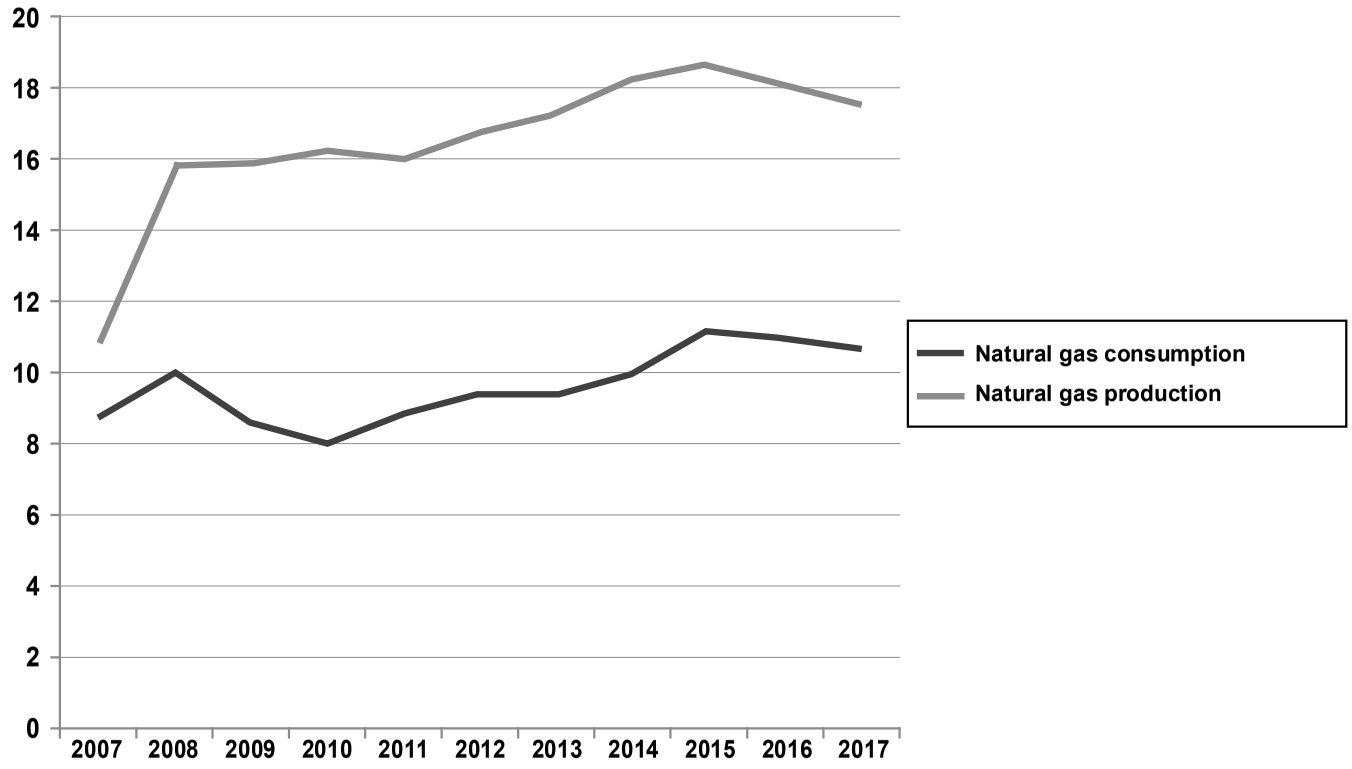
Azerbaijan: Foreign Trade in 2006-2017 (*in millions of dollars*)



Source: Compiled by the authors based on data from the State Statistical Committee of the Republic of Azerbaijan.

Figure 3

Azerbaijan: Natural Gas Production and Consumption in 2007-2017 (*in billions of cubic meters*)



Source: Compiled by the authors based on data from BP.

oil prices. Considering these factors, Azerbaijan has sought to diversify its economy so as to reduce its dependence on the oil sector while developing the non-oil sector.[15] Special attention is being paid to renewable energy sources, including wind and solar power.

Another hydrocarbon raw material, natural gas, has become more important for Azerbaijan in the last decade.[16] In 1999, following the discovery of large natural gas reserves in the Shah Deniz field, Azerbaijan's energy policy began to change.[17] As a result, by 2007 the country became fully self-sufficient in natural gas, stopped importing it, and turned into an exporter of this hydrocarbon. But growing domestic demand (see Fig. 3) has induced Azerbaijan to start importing small amounts of gas since 2015, first from Russia and then from Turkmenistan and Iran.[18] In 2016, according to BP, Azerbaijan's proved reserves of gas totaled 1.3 trillion cubic meters (about 0.7% of global reserves).[19] Natural gas now plays a key role in the country's economy, accounting for about two-thirds of its total domestic energy consumption. About half of Azerbaijan's natural gas consumption is used for power generation.[20]

Along with resolving the problem of meeting domestic demand, Azerbaijan has also been looking for ways to strengthen its position in the natural gas market. In order to achieve this goal, the Azerbaijani authorities have sought to create infrastructure for gas exports. The Baku-Tbilisi-Erzurum gas pipeline, whose construction began at the end of 2002 with the support of Western countries and Turkey, was put into operation in July 2007. This 970-kilometer-long pipeline, built at a cost of $1 billion, has a capacity of 20 bcm of gas per year. But until 2017 the pipeline transported an average of 5-6 bcm per year. Most of this gas goes to Turkey, and 1.5 bcm per year, to Georgia.

The BTE gas pipeline was the second regional project that bypassed Russia and Iran. It has allowed Azerbaijan to create conditions for economic development and to become a gas exporter. In addition, the Baku authorities are looking to enter the European market, although Azerbaijan's main problem is resource depletion. However that may be, the implementation of these projects has reduced Russian influence on Azerbaijan's energy sector by giving Baku direct access to international energy markets bypassing Russia.[21]

The Role of Turkey in Implementing the Southern Energy Corridor

The key role in the implementation of energy projects in the Southern Caucasus belongs to Turkey. Ankara has not only achieved the construction of new pipelines, but has also been able to pursue a policy of balancing between Russia and Western countries. Simultaneously, Ankara has managed to establish control over hydrocarbon resources coming from Russia—Blue Stream gas

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[15] See: N. Vidadili, E. Suleymanov, C. Mahmudlu, "Transition to Renewable Energy and Sustainable Energy Development in Azerbaijan," *Renewable and Sustainable Energy Reviews*, Vol. 80 (C), 2017, p. 1153.

[16] See: I. Ibragimov, *Strategiia effektivnogo vliianiia: vneshniaia politika, "myagkaia sila" i energeticheskaia diplomatiia Azerbaidzhana v XXI veke*, Moscow, 2016, p. 47.

[17] See: S. Zhiltsov, "Energy Flows in Central Asia and the Caspian Region: New Opportunities and New Challenges," *Central Asia and the Caucasus*, Vol. 15, Issue 4, 2014, p. 73.

[18] See: S. Pirani, *Let's Not Exaggerate: Southern Gas Corridor Prospects to 2030* // The Oxford Institute for Energy Studies, July 2018, p. 8.

[19] See: *BP Statistical Review of World Energy*, June 2018, 67th edition, p. 26.

[20] See: *Country Analysis Brief: Azerbaijan*, U.S. Energy Information Administration, 22 June, 2016, p. 8.

[21] See: *Uglubleniye Rossiisko-Turetskikh otnoshenii: doklad*, ed. by A.V. Kortunov, E. Ershen, Russian International Affairs Council (RIAC), Moscow, 2018, 128 pp.

pipeline (2002) and TurkStream gas pipeline (to be put into operation by 2020)—and from Azerbaijan: BTC (2006) and BTE (2007). By supporting the implementation of these pipeline projects, Turkey has gained control over the "energy valve" that allows it to regulate oil and gas supplies to European countries.

In recent years, Ankara has taken the lead from Western countries that had the greatest influence on the development of energy projects in the Southern Caucasus. A key factor here was the failure of the Nabucco gas pipeline project, initiated by the EU in 2002. The Nabucco pipeline was to supply natural gas from the Caspian region to the European market. The project was associated with the long-term goals of European and U.S. policy designed to limit Russian influence in Europe. But owning to insufficient gas supply for Nabucco, Turkey and Azerbaijan began to lose interest in the project and revised their energy policy. The EU's attempts in late 2012 and early 2013 to maintain interest in the project by developing a shorter route (Nabucco West) failed to produce the desired result. The new version of the project encountered the same difficulties as Nabucco: lack of available gas supply. Caspian hydrocarbons from Turkmenistan could not be supplied through the new pipeline because of poor prospects for the construction of a Trans-Caspian gas pipeline.[22] As a result, Azerbaijan, a long-standing supporter of Nabucco, adjusted its policy of outright support for the European pipeline project and proposed, jointly with Turkey, its own energy projects as part of the Southern Gas Corridor, which was expected to increase Azerbaijani gas exports to the European market.

The Southern Gas Corridor project provides for the construction of a system consisting of the Trans-Anatolian Pipeline (TANAP) and the Trans-Adriatic Pipeline (TAP), with the whole system to be completed after 2019. The main supply source for these pipelines is the Shah Deniz gas field, which will supply 16 bcm of gas per year, including 6 bcm to Turkey and 10 bcm to the European market. The Trans-Anatolian pipeline, proposed by Azerbaijan and Turkey, is to be connected to the already operational Baku-Tbilisi-Erzurum pipeline[23] so that Azerbaijani gas can be supplied to Turkey's western borders. Overall, TANAP should be seen as a local pipeline project of interest primarily to Azerbaijan and Turkey.

In addition, the consortium for the development of Azerbaijan's Shah Deniz gas condensate field took a decision in June 2013 to choose the Trans-Adriatic Pipeline as the main route for supplying gas to Europe. This pipeline will run through Greece and Albania, cross the Adriatic Sea, and come ashore in Italy. If the TAP project is implemented, it will supply up to 10 bcm of gas per year to Europe after 2019-2020.

For some European countries, primarily those located in Southern Europe, gas supplies from Azerbaijan can play a noticeable role. On the whole, however, Azerbaijani gas will have no serious impact on the European gas market, which may soon be getting significant amounts of liquefied natural gas (LNG) and shale gas.

In contrast to Nabucco, which provided for the supply of Caspian gas to the main gas-consuming countries, TAP is designed to transport gas to Greece and Italy, where gas consumption is lower. Since the terminals for Azerbaijani gas exports are to be located in countries that have no particular need to diversify energy supplies,[24] it is difficult to talk about Caspian gas gaining entry to the European market. For the supply of gas to other European countries, it is necessary to build new connecting pipelines, which requires additional financing and takes time.

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[22] See: I.S. Zonn, S.S. Zhiltsov, A.V. Semenov, "Export of Hydrocarbons from Turkmenistan: Results and Perspectives," in: *The Handbook of Environmental Chemistry*, Vol. 51, pp. 125-137.

[23] See: A. Cohen, "Caspian Gas, TANAP and TAP in Europe's Energy Security," Istituto Affari Internazionali—IAI Working papers, 14 April, 2014, 17 pp.

[24] See: F. Umbach, S. Raszewski, *Strategic Perspectives for Bilateral Energy Cooperation between the EU and Kazakhstan: Geo-Economic and Geopolitical Dimensions in Competition with Russia and China's Central Asia Policies*, Konrad-Adenauer-Stiftung, 2016, 70 pp.

In spite of this, a geopolitical battle has unfolded around the TurkStream project and TAP, which is a gateway for Azerbaijani gas exports to the European countries. The Southern Gas Corridor is positioned as an alternative to the TurkStream gas pipeline project being implemented by Russia and Turkey. Such comparisons do not reflect the actual situation, the fact that Russian gas will remain the major source of gas supply to the EU in the coming decade. Additional amounts of gas coming from Azerbaijan will provide new opportunities for European countries to export hydrocarbons and will have an effect on price negotiations with Russia. But a real influence on the European gas market and Russian policy can be exerted by additional amounts of Azerbaijani gas only much later. In this context, it is incorrect to contrast TurkStream and the Azerbaijani-Turkish projects. Their implementation is caused by different political circumstances and depends on the availability of natural gas reserves.

The Energy Policy of Georgia

The need for an active energy policy in Georgia is due to a domestic shortage of fuel and energy resources. Although foreign companies are actively engaged in oil and gas exploration in the country, there are no data on large reserves.[25] According to the National Statistics Office of Georgia (Geostat), natural gas production in 2017 was only 8.5 million cubic meters, while gas imports reached 2.3 bcm.[26] In 2017, Georgia imported 65.8% more gas than in 2013. Forecasts for the next decade published by the Georgian Oil and Gas Corporation show that domestic demand for gas will continue to grow,[27] just as gas imports (see Fig. 4).

A specific feature of energy demand in Georgia is its seasonal nature. During the winter months, demand for fuel is several times higher (see Fig. 5).

The share of natural gas in the country's total energy balance is about 40%. Back in the summer of 2004, Georgia and Iran agreed in principle on the supply of Iranian natural gas to Georgia via Azerbaijan. But anti-Iranian sanctions and an increase in the share of Azerbaijani gas in the Georgian market brought cooperation between Georgia and Iran in the sphere of gas transportation projects to an end.[28] Since 2008, after the worsening of Russian-Georgian relations and the cessation of Russian gas supplies to Georgia, Azerbaijan has become the country's main partner in this area. In 2017, Russia still accounted for 10% of gas supplied to Georgia,[29] but since 2018 Georgia has been buying natural gas only from Azerbaijan.

Dependence on imports of Azerbaijani gas raises the question of diversification of hydrocarbon supply sources. Despite close economic and political relations with Azerbaijan, energy dependence on gas imports from that country is a potential threat to Georgia's national security.

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[25] See: I.S. Zonn, S.S. Zhiltsov, "Oil and Gas Production in the Black Sea Shelf," in: *The Handbook of Environmental Chemistry*, Vol. 51, pp. 51-65.

[26] See: *Energy Balance of Georgia 2017*, National Statistics Office of Georgia, available at [http://geostat.ge/?action=page&&p_id=2916&lang=eng], 3 January, 2019.

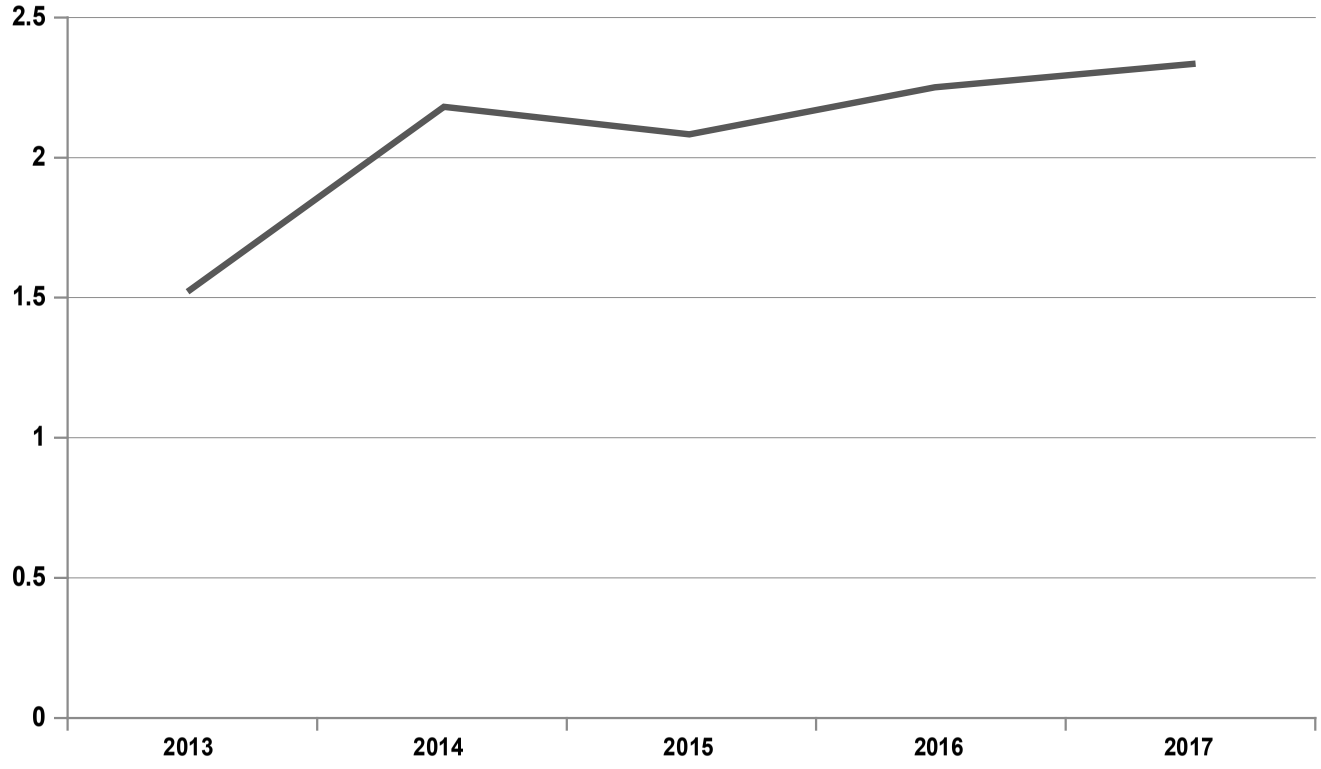
[27] See: *Ten-Year Development Plan for Georgian Gas Transmission Network 2018-2027*, Georgian Oil and Gas Corporation, October 2017, p. 19.

[28] See: V.S. Davtian, "Rol energeticheskikh kompanii na Yuzhnom Kavkaze" in: *Postsovetskoe prostranstvo: rol vneshnego faktora*, Collected articles, ed. by A.B. Krylov, A.V. Kuznetsov, G.I. Chufrin, IMEMO RAN, Moscow, 2018, pp. 215-225.

[29] See: E.M. Kuzmina, "Rossiisko-Gruzinski dialog v deistvii," in: *Rossia-Gruzia. Otnosheniia: energetika, ekonomika, bezopasnost, geopolitika, migratsiia i kul'tura*, ed. by N. Tsikhistavi-Khuchishvili, I.N. Timofeyev, M. Areshidze, T.A. Makhmutov, Damani, Tbilisi, 2018, pp. 24-32.

Figure 4

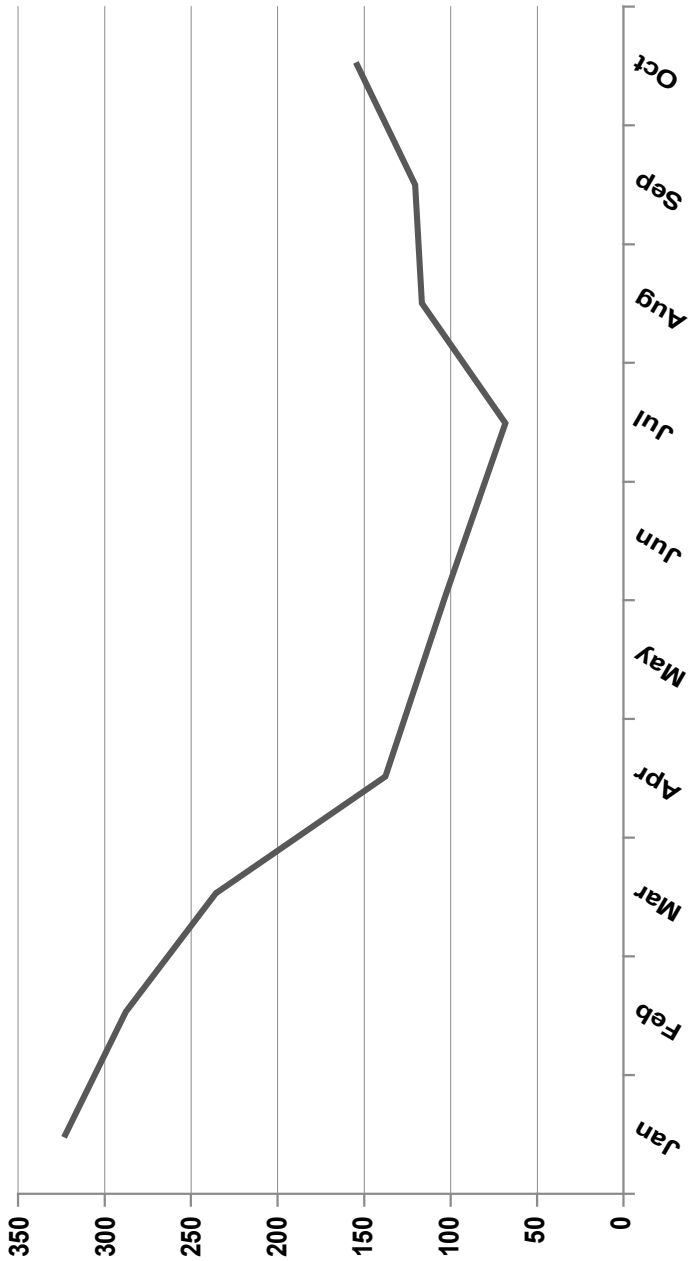
Georgia: Natural Gas Imports in 2013-2017 (*in billions of cubic meters*)



Source: Compiled by the authors based on data from the National Statistics Office of Georgia.

Figure 5

Georgia: Natural Gas Imports in January-October 2018 (*in millions of cubic meters*)



Source: Compiled by the authors based on data from the National Statistics Office of Georgia.

The situation in the Georgian oil sector is similar. Oil has long been produced in Georgia, albeit in insignificant amounts.[30] According to the National Statistics Office of Georgia, oil production in the country in 2017 was only 32 thousand tons. Georgian imports of crude oil are also insignificant (see Table 1), while imports of oil products have an important place in its energy sector and keep increasing (see Table 2). The main supplier of oil and oil products to Georgia is Azerbaijan. A strategic document of the Ministry of Energy of Georgia states: "For improving national energy security, one of the main directions is diversification of supply sources and routes for oil, natural gas and electricity; efficient utilization of local energy potential; and if necessary, creation of strategic minimum reserves for oil and/or oil products."[31]

Table 1

Georgia:
Production and Import of Crude Oil in 2013-2017
(in thousands of tons)

	2013	2014	2015	2016	2017
Production	**47.9**	**43.3**	**40.2**	**39.1**	**32**
Import	**—**	**10.3**	**133.3**	**43.3**	**59.6**

Source: Compiled by the authors based on data from the National Statistics Office of Georgia.

Table 2

Georgia:
Production and Import of Oil Products in 2013-2017
(in thousands of tons)

	2013	2014	2015	2016	2017
Production	**—**	**—**	**—**	**—**	**—**
Import	**1,065.4**	**1,152.2**	**1,347.2**	**1,526.6**	**1,440.8**

Source: Compiled by the authors based on data from the National Statistics Office of Georgia.

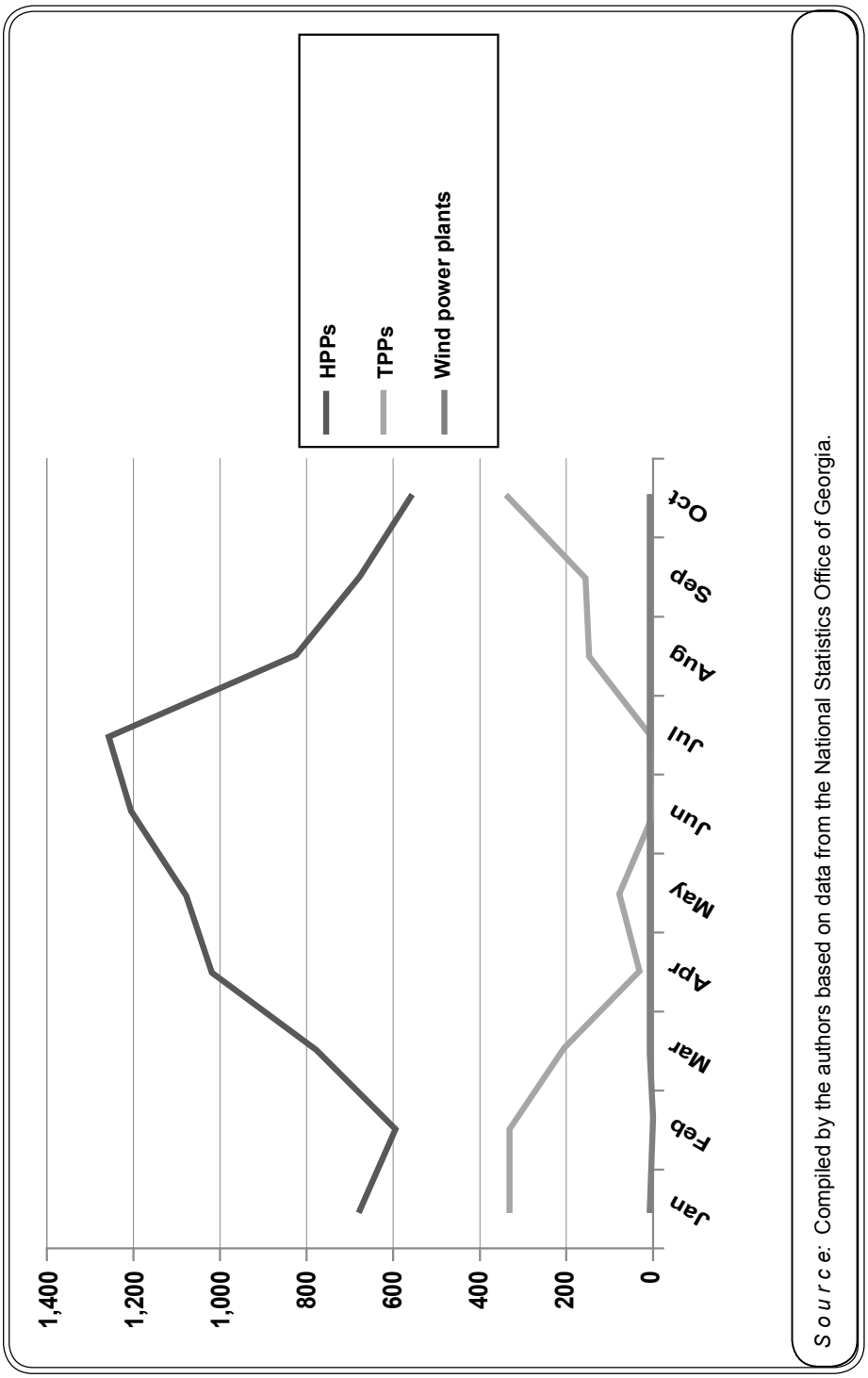
Despite the domestic shortage of fuel and energy resources in Georgia, foreign companies continue to show a strong interest in that country. This is due to Georgia's geostrategic position, which is of particular importance given the continuation of the Nagorno-Karabakh conflict. In addition, Georgia is a transit country in regional energy projects. This transit corridor is an attractive route for transporting hydrocarbons from Azerbaijan and eventually from Central Asia to international markets. It is used to transport hydrocarbons by pipeline, rail, and sea through Georgian seaports. Today, there are two energy transit corridors running through Georgia: East-West and North-South. Within the framework of the East-West transit corridor, Georgia is involved in pipeline projects such as Baku-Supsa, Baku-Tbilisi-Ceyhan, and Baku-Tbilisi-Erzurum. They have enhanced Georgia's regional importance as a transit country, ensuring close cooperation with Turkey and Azerbaijan. Geor-

[30] See: "Ashot Egiazarian: Rol prirodnogo gaza v energetike Gruzii (spravka)," REGNUM News Agency, 25 October, 2006, available at [http://regnum.ru/news/728152.html], 3 January, 2019.

[31] *Main Directions of the State Policy in Energy Sector of Georgia*, Ministry of Energy of Georgia, p. 2, available at [http://www.energy.gov.ge/ministry.php?id_pages=12&lang=eng], 4 January, 2019.

Figure 6

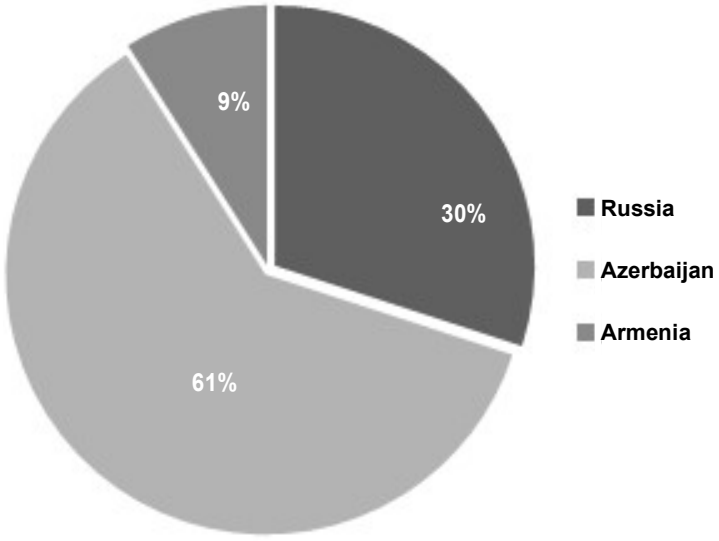
Georgia: Electricity Generation in January-October 2018 (*GWh*)



Source: Compiled by the authors based on data from the National Statistics Office of Georgia.

Figure 7

Georgia: Electricity Imports in 2017



Source: Georgian National Energy and Water Supply Regulatory Commission, *Report on Activities of 2017.*

gia sees its participation in these projects as a step towards integration into Euro-Atlantic structures. Its authorities also support the implementation of TANAP, which will increase foreign investment inflows and strengthen Georgia's role as a transit country.

The North-South transit corridor includes the North Caucasus-South Caucasus gas pipeline, which ensures the transit of Russian gas to Armenia. Using its geopolitical location, Georgia seeks to become a logistics hub and a connecting link between East and West, North and South. Georgia's energy policy is designed to deepen the country's involvement in energy transportation projects of regional and international importance. Its socioeconomic development strategy, *Georgia 2000*, emphasizes that the country's infrastructure is still not sufficiently developed to ensure maximum use of its transit potential.[32]

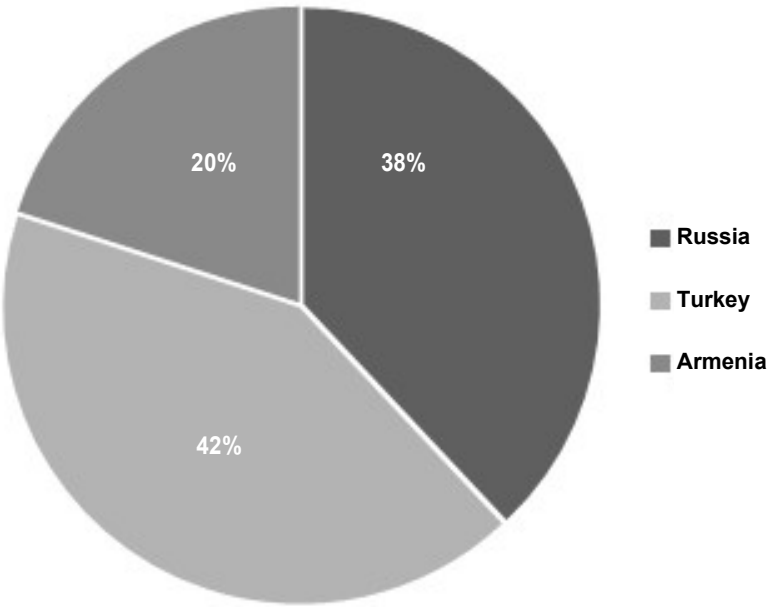
In order to reduce dependence on imported energy resources and enhance energy security, Georgia uses hydro power, wind power, solar energy, biomass, and geothermal power. Their development is supported by domestic and foreign investment, as well as R&D programs. Georgia's energy policy is aimed at developing renewable energy sources. In 2007-2017, domestic electricity consumption in Georgia increased by an average of 4.4% per year.[33] Electricity in the country is mainly generated by hydroelectric power plants (HPPs) and thermal power plants (TPPs) (see Fig. 6).

Today, the country has 21 licensed and 53 small, run-of-the-river HPPs that do not require a license. The largest source of power generation is the Enguri HPP, which accounts for about a third

[32] See: *Social-Economic Development Strategy of Georgia "GEORGIA 2020"*, Government of Georgia, 2015, p. 31.
[33] See: *Georgian National Energy and Water Supply Regulatory Commission. Report on Activities of 2017*, p. 10.

Figure 8

Georgia: Electricity Exports in 2017



Source: Georgian National Energy and Water Supply Regulatory Commission, *Report on Activities of 2017.*

of all electricity generated in the country. Enguri HPP and Vardnili HPP have large dams and regulating reservoirs.[34] In 2017, HPPs generated 80.4% of the total amount of electricity produced in the country. The share generated by TPPs in 2016-2017 was 18.8%, while the wind power plant commissioned in late 2016 contributed 0.8%. Since seasonality is a specific feature of the energy sector, domestic demand for electricity increases in the autumn and winter months, thus making it necessary to import electricity. In 2017, 30% of Georgian electricity imports came from Russia, 61% from Azerbaijan, and 9% from Armenia (see Fig. 7).

In the second half of the spring and summer period, abundant water resources make it possible to meet domestic demand for electricity and to export its surplus. Electricity exports go to Turkey (42% of the total), Russia (38%), and Armenia (20%) (see Fig. 8).

Georgia's energy strategy is designed to increase total hydropower capacity so as to meet domestic electricity demand and ensure exports to neighboring countries. The strategy's key purpose is to turn Georgia into a regional hub for the generation and sale of clean energy.

According to the *Georgia 2020* strategy, the main goal of government policy in the energy sector is to reduce energy imports and increase energy independence while attracting foreign investment for the development of the energy sector.[35] But the Georgian authorities have so far been unable to

[34] See: *Electricity Sector: Overview*, Business Association of Georgia, June 2016, p. 1.
[35] See: *Social-Economic Development Strategy of Georgia "GEORGIA 2020"*, p. 33.

create a robust energy system. According to the Energy Trilemma Index, which is published annually by the World Energy Council and ranks countries' energy performance on three dimensions (energy security, energy equity, and environmental sustainability), in 2018 Georgia ranked 69th, Armenia 43rd, Azerbaijan 27th, Turkey 44th, and Russia 59th.[36]

The Energy Security of Armenia

In the early 1990s, Western countries saw Armenia as a convenient transit corridor for the transportation of energy resources from the Caspian basin to the world market. But because of the unresolved Nagorno-Karabakh conflict, Armenia was excluded from regional energy transportation projects. This was also due to Armenia's close economic and political ties with Russia. In addition, Western countries were interested in implementing pipeline projects that would bypass Russia in order to reduce its influence in the region. As a result, Armenia was isolated from new energy sources, because it was not involved in projects such as the Baku-Tbilisi-Ceyhan oil pipeline, the Baku-Tbilisi-Erzurum gas pipeline, and the construction of the Baku-Tbilisi-Kars railway. This situation threatened Armenia's energy security. Azerbaijan's continuing efforts to push the country out of regional infrastructure programs were seen in Armenia as an immediate threat.[37] That was how Azerbaijan tried to pressure the Armenian side into making concessions in the Nagorno-Karabakh conflict.[38]

The main energy sources traditionally used in Armenia are oil products, natural gas, nuclear energy, hydroelectric power, and coal. Since hydrocarbon resources are scarce, Armenia depends on their import. Russian gas is supplied through the Vladikavkaz-Tbilisi-Erevan gas transportation system with a capacity of 4.38 bcm per year. A monopoly right to supply Russian gas belongs to Gazprom Armenia, a 100% subsidiary of Gazprom.[39] In 2016, gas imports from Russia totaled 1.86 bcm.

Armenia also imports natural gas from Iran through the Iran-Armenia gas transportation system with a capacity of 2.3 bcm per year. In exchange for gas supplies, Armenia exports electricity to Iran.[40]

Although Armenia has no oil and gas reserves, the country manages to meet 30% of its energy requirements. It produces nuclear and hydroelectric power. The nuclear power industry plays a key role in national energy supply, meeting almost a third of domestic energy demand. The decision to build a nuclear power plant (NPP) in Armenia was taken back in Soviet times. The Armenian NPP consists of two earthquake-resistant units, activated in 1976 and 1980, respectively. In 1989, after the 1988 Spitak earthquake, the NPP was shut down. But during the economic crisis that followed the breakup of the U.S.S.R., the Armenian government decided to reopen the plant. As a result, the second unit was restarted in 1995.

An action plan for 2014-2020 approved by the Armenian government provides for an extension of the lifetime of the NPP's operating unit by 10 years and for the construction of a new (1,000 MWe)

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[36] See: *World Energy Trilemma Index 2018*, World Energy Council, pp. 15-16.

[37] See: D. Gasparian, "Rol rossiisko-armianskogo partnerstva v sfere obespecheniia energeticheskoi bezopasnosti Respubliki Armenia," *Istoriia, sotsiologiia, politologiia*, 2008, p. 83.

[38] See: Prezident Ilkham Aliyev: My izolirovali Armeniiu or vsekh regionalnykh proyektov, 1News.az, 10 July, 2018, available at [http://www.1news.az/news/sostoyalos-zasedanie-kabineta-ministrov-azerbaydzhana], 27 December, 2018.

[39] See: E.A. Visulkina, G.N. Rozhkov, I.P. Azyukov, "Sotorudnichestvo stran YeAES v energeticheskoi sfere," *All-Russia Scientific Conference "Ensuring National Security in the Context of Eurasian Integration,"* 15 March, 2017, p. 39.

[40] See: *Armenia: Country Overview*, International Energy Agency, available at [http://www.eu4energy.iea.org/countries/Armenia], 24 January, 2018.

unit on the plant's premises. The new unit is to be put into operation in 2026.[41] This project is a top priority of Armenia's energy strategy, with Russia and other investors taking part in its implementation.[42]

Two thermal power plants, Erevan TPP and Hrazdan TPP, are of particular importance in Armenia's energy supply. The generating unit of the Erevan TPP with a capacity of 272 MW of electricity was put into operation in 2010. Electricity generated by hydropower plants met 6.5% of total demand in 2016. The largest hydropower systems are the Vorotan and Sevan-Hrazdan cascades, which include 10 HPPs. Under Armenia's energy strategy, there are plans to build several new HPPs, as well as to develop renewable energy resources.

Conclusion

The participation of Azerbaijan and Georgia in energy projects initiated by non-regional states has had a positive effect on their economy, helped to attract foreign investment, and provided additional opportunities for expanding political relations with Euro-Atlantic structures. At the same time, Armenia's exclusion from projects involving exports of Caspian hydrocarbons to external markets has had a negative impact on the development of the Southern Caucasus without bringing the countries of the region closer to a settlement of the Nagorno-Karabakh conflict. Moreover, the new pipeline projects have contributed to the establishment of new economic relations both within the region and with non-regional countries.

Competition between Russia, Turkey, Iran, and Western countries for the right to control exports of hydrocarbons produced in the region continues in the Southern Caucasus. In the last decade, significant successes in this area have been achieved by Turkey, which has not only "opened the door" for Azerbaijani hydrocarbons, but has also created a Turkish-Azerbaijani tandem in the energy sector. While implementing its energy policy, Turkey has actively promoted various economic projects and has created mechanisms for influencing the political situation in Azerbaijan and Georgia, since it views the territory of these countries as a strategic bridgehead for advancing its own interests.

All in all, one can say that energy infrastructure projects in the Southern Caucasus have been implemented in the interests of third countries. From a geopolitical perspective, the greatest beneficiary here is the United States, which has regarded new hydrocarbon export routes as a long-term objective ever since the 1990s. The successes of the European Union are less obvious, because the European countries have been unable to implement their ambitious Nabucco project and change the foreign policy course of Turkmenistan. Turkey's policy has been effective: it has managed to increase its influence in the Southern Caucasus through the construction of new pipelines. Turkish activity conflicts with the interests of Russia and Iran, which also have a strong interest in the Southern Caucasus. All the more so because in recent years Russia and Iran have continued their energy cooperation with the South Caucasian countries, protecting their own long-term interests in the region.

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[41] See: S.A. Gevorkian, O.S. Avagian, V.Z. Marukhian, A.A. Gevorkian, "Analiz programm razvitiia energeticheskoi sistemy Respubliki Armeni," *Vestnik NPUA. Elektrotekhnika, energetika*, No. 1, 2017, p. 22.

[42] See: *Country Nuclear Power Profiles: Armenia (Updated 2018)*, IAEA, available at [http://cnpp.iaea.org/countryprofiles/Armenia/Armenia.htm].