

Dependence on imports in Georgia's natural gas sector: trends and prospects

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Abstract

Georgia's energy sector faces numerous challenges, and achieving energy independence requires the implementation of effective and consistent measures. According to the country's energy balance, the share of natural gas in total energy consumption exceeds 40%. At the same time, the satisfaction of natural gas demand is almost entirely dependent on imports, as domestic production accounts for only about 1%. This dependence increases the cost of natural gas and, consequently, has a negative impact on consumer expenses.

Demand for natural gas in the residential sector has been increasing year by year, leading to a rise in import volumes. The structure of consumers includes four main groups: thermal power plants, vehicle gas refueling stations, residential consumers, and non-residential sectors. It is noteworthy that over the past decade, more than 20% of natural gas consumption has been attributed to thermal power plants, indicating the significant role of imported resources in electricity generation and ultimately negatively affecting utility tariffs.

The natural gas sector represents a natural monopoly, which requires appropriate legislative regulation. In Georgia, this function is carried out by the Georgian National Energy and Water Supply Regulatory Commission, which issues licenses for operations and sets tariffs based on regulatory audits of the costs incurred by licensed companies.

The aim of the study is to assess the current state of Georgia's natural gas sector, identify key challenges, and develop possible solutions based on data from various sources. The paper presents the main prospects for the sector's development as part of its conclusions.

Keywords: Energy, Natural Gas, Regulation, Import

Introduction

One of the key determinants of state sovereignty for Georgia is energy independence. The country's energy security is directly linked to its economic stability; therefore, the energy sector is consistently regarded as a central component of state interests and strategic policy.

Ensuring energy independence is impossible without the rational and efficient utilization of domestic resources. In this process, particular importance is attached to attracting investments in the energy sector,

introducing modern technologies, and developing energy infrastructure, all of which serve as essential preconditions for the country's economic development.

An analysis of Georgia's energy balance shows that the share of natural gas in total energy consumption has been steadily increasing year by year, exceeding 40% according to the latest data. This trend further strengthens the strategic importance of the natural gas sector. Accordingly, a comprehensive analysis of the sector makes it possible to assess the main challenges and risks facing the country, particularly in a context where a significant portion of natural gas consumption is dependent on imported resources.

Natural Gas Sector

Georgian Energy and Water Supply Regulatory Commission is the main regulatory authority responsible for overseeing and monitoring the natural gas market in Georgia, in cooperation with the Ministry of Economy and Sustainable Development. Under the current legislation, the Commission is empowered to issue licenses to entities operating in the natural gas sector and to supervise their activities in order to ensure proper market functioning.

According to 2025 data, there are 16 licensed distribution companies operating in the retail natural gas market, providing supply and distribution services across Georgia. Among them, three major licensed operators stand out: Tbilisi Energy, which operates within the capital city of Tbilisi, SOCAR Georgia Gas and Sakorggazi, whose service areas cover most of the country except for Tbilisi.

One of the main challenges of Georgia's natural gas sector is its high dependence on imports. The country has virtually no significant domestic natural gas reserves, and local production accounts for less than 1% of total consumption. Therefore, natural gas supply is primarily secured through imports.

Natural gas imports to Georgia mainly come from neighboring countries, Azerbaijan and Russia. According to 2024–2025 natural gas balance data, the country received an average of 5.4 billion cubic meters of natural gas annually, of which approximately 40–42% was allocated for transit purposes.

In terms of supply structure, gas imported from Azerbaijan accounts for 38% of the total balance, gas received via the South Caucasus Pipeline represents 4.4%, while imports from Russia account for 16%. It is also noteworthy that no natural gas imports have been recorded from Armenia since 2020.

Although domestic natural gas production remains stable, its volume is negligible within the overall gas balance and has no significant impact on ensuring the country's energy security. Accordingly, for the sustainable development of the natural gas sector and the strengthening of energy independence, particular importance is attached to diversifying import sources, developing domestic energy resources, and ensuring long-term strategic energy planning.

Table N1. Natural Gas Imports in Georgia, 2020–2024 by Entry Points (million cubic meters)¹

Natural Gas Entry Point		2020	2021	2022	2023	2024
	Import	1,183	1,132	1,411	1,081	775
Azerbaijan	Additional and optional	-	-	-	963	1,465
Azerbaijan South	- Import	259	25	-	-	-
Caucasus Gas pipeline	Additional and optional	900	1,026	1,146	413	70
Russia		204	397	520	596	788
Armenia		19	-	-	-	-
Local extraction		8	15	14	16	15
All		2,573	2,595	3,091	3,069	3,114

Competition in Georgia’s natural gas market has a significant impact on the formation of the final price of natural gas. In the pricing process, particular importance is attached to the distinction between social and commercial segments, as these segments are characterized by different tariff policies.

The relatively high price of natural gas in Georgia is mainly driven by the cost of imported natural gas in foreign currency, as well as fluctuations in the national currency exchange rate. In particular, fluctuations of the Georgian lari against the US dollar have a significant impact on consumer tariffs, since natural gas is predominantly purchased in foreign currency.

Georgia benefits from preferential terms for gas supplied through the South Caucasus Pipeline, commonly referred to as “social gas.” This resource is mainly used to supply households and thermal power plants with natural gas. Accordingly, the tariff for the social segment is significantly lower compared to the commercial segment.

According to the tariff set by GNERC, the price of social gas, taking into account various state subsidies, averages 0.28 GEL per cubic meter.

The retail natural gas market is divided into four main consumption sectors: thermal power plants, auto gas filling stations, household consumers, and non-household consumers. Analysis of consumption

¹ GNERC Annual Report 2024

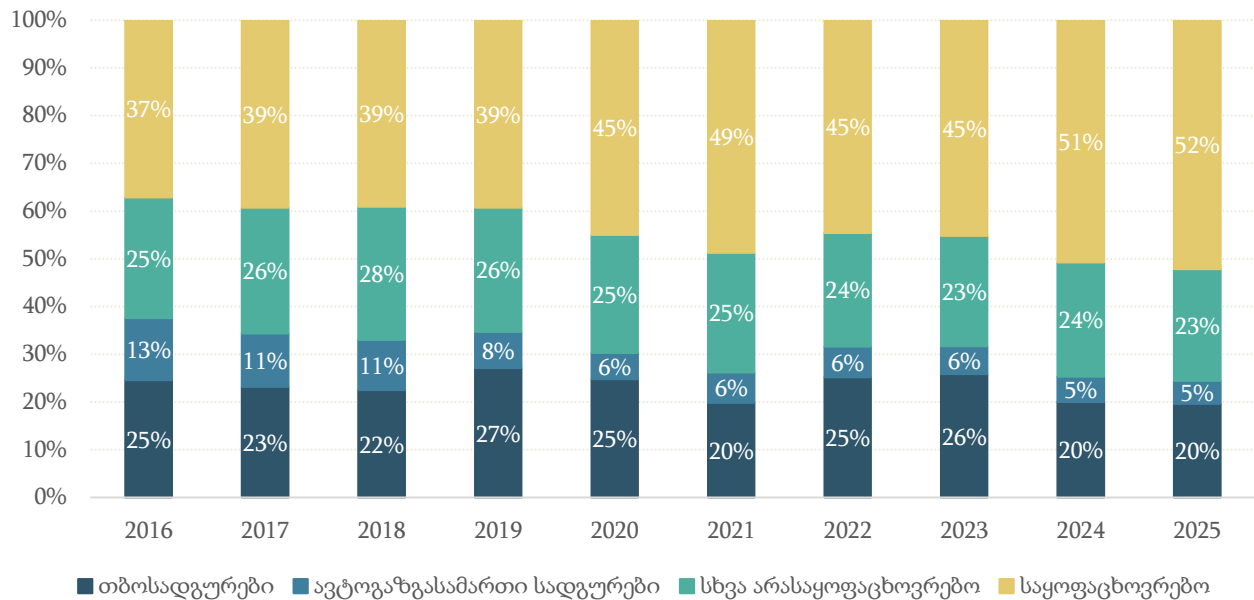
<https://gnerc.org/files/Annual%20Reports/Reports%20English/Annual%20Report%202024%20ENG%20Final.pdf>

structure shows that, on average, 25% of total natural gas consumption is attributed to thermal power plants.

Electricity generated by thermal power plants is mainly consumed within the domestic market. Overall, in Georgia's electricity balance, the share of electricity produced by thermal power plants accounts for approximately 20–25%. This indicates that electricity generation is also significantly dependent on imported natural gas. For this reason, electricity produced by thermal power plants is considered relatively expensive, as its production cost is highly dependent on the price of imported energy resources.

Figure N1 clearly illustrates the trends in natural gas consumption between 2015 and 2024 across different sectors, allowing for an assessment of the country's energy consumption structure and the role of natural gas in the national energy system.

Figure 1. Natural Gas Consumption by Different Sectors²



It is noteworthy that natural gas consumers are divided into two categories: household and non-household users. For the household sector, tariffs are determined by the Commission on the basis of a cost-regulatory audit, through which the operational and capital expenditures of individual companies are examined. In contrast, the non-household sector is deregulated, meaning that the price of natural gas supply is determined through agreements between the contracting parties.

The difference between household and non-household tariffs is significant, with commercial consumers facing considerably higher prices. This disparity is mainly associated with the so-called “social gas” policy, under which households benefit from preferential pricing conditions.

² GNERC, www.gnerc.org (15.05.2026)

The household tariff set by the GNERC consists of three main components: transmission, distribution and supply tariffs. Each component reflects the respective costs incurred in delivering natural gas to the end consumer.

Recent data indicate that both household and non-household subscriber numbers have been increasing year by year. This trend is largely driven by state gasification programs, as well as the development of new residential buildings and infrastructure projects.

Natural gas distribution companies collectively serve more than 1.5 million subscribers. Among them, the subscribers of Tbilisi Energy, SOCAR Georgia Gas and Sakorggazi account for more than 85% of the total market.

Household natural gas consumption varies depending on settlement type. In rural areas, firewood remains a widely used heating source, whereas in urban areas natural gas consumption is significantly higher.

At the same time, natural gas consumption is highly seasonal, with a notable increase during the winter months. As a result, the revenues of distribution companies are also seasonal, which in some cases may negatively affect their financial stability and operational sustainability.

Investment plays a crucial role in the development of the natural gas sector. According to 2025 data, investments made by the six largest companies in the sector exceeded 200 million GEL, surpassing the planned level by approximately 40%.

The analysis of investment structure shows that around 94% of total capital expenditures are directed toward distribution activities, while only 6% is allocated to transmission. It is also important to assess the sources of financing. Investments in the natural gas sector are primarily financed through three sources: own funds, debt financing, and third-party funding.

In recent years, large distribution companies have been using debt financing less frequently. Approximately 80% of investments are financed through companies' own funds, while around 20% comes from third-party funding. In cases where capital expenditures are financed by third parties, such costs are generally not included in tariff calculations, which to some extent reduces the risk of tariff pressure on consumers.

Conclusion

In conclusion, it can be stated that Georgia faces significant challenges in the natural gas sector, primarily due to its high dependence on imports. Domestic natural gas production in Georgia remains negligible and is insufficient to meet internal demand. As a result, the country continues to rely heavily on imported natural gas, which creates substantial risks in terms of energy security.

One of the main ways to mitigate this challenge is the development of the electricity sector. Georgia's considerable hydropower potential and renewable energy resources provide an opportunity to increase domestic electricity generation and gradually reduce dependence on natural gas. In this regard, the development of hydropower plants, as well as the effective utilization of wind and solar energy, is

particularly important. Consequently, it becomes possible to partially substitute natural gas consumption with domestically produced electricity. At the same time, it is essential to reduce the share of thermal power plants in the country's overall electricity balance, as their operation is directly dependent on imported natural gas and is associated with relatively high electricity generation costs.

The analysis of natural gas consumption shows that in recent years, growth has mainly been recorded in the residential sector. This trend is largely associated with the expansion of gasification in newly developed settlements and the increase in the number of consumers. In addition, the natural gas sector is characterized by strong seasonality. During the summer period, natural gas consumption decreases significantly, which is linked both to reduced operation of thermal power plants and to lower demand in the residential sector.

One of the key challenges for the sector remains the implementation of nationwide gasification programs. Although gasification of rural areas is being gradually carried out under state programs, this process involves significant financial costs for both the government and private companies. Despite the investments made, natural gas consumption intensity in rural settlements remains relatively low. Accordingly, the financial return on such projects for companies is comparatively limited.

Ensuring energy security also requires the existence of natural gas storage facilities. Such infrastructure would enhance the reliability of gas supply, ensure uninterrupted provision to consumers in case of technical failures or disruptions, and improve the overall stability of the energy system. In addition, gas storage would play an important role in diversifying energy resources and building strategic reserves.

Finally, strengthening Georgia's energy independence requires additional investments in the energy sector, efficient utilization of domestic energy resources, and support for renewable energy development. The consistent implementation of these measures will significantly contribute to reducing dependence on natural gas and imported energy resources, thereby strengthening the country's long-term energy and economic sustainability.

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