Saba Tavelishvili
G. Tsereteli Institute of Oriental Studies

TURKEY'S STRATEGIC ROLE IN EUROPEAN ENERGY SECURITY: IMPLICATIONS OF THE ENERGY SECTOR FOR POLITICAL COOPERATION

Abstract

Turkey's strategic location between energy-producing regions and Europe positions it as a central actor in European energy security. The Southern Gas Corridor has enhanced Turkey's role as a transit hub, allowing the European Union to diversify its gas supplies and reduce dependence on Russia. Despite diversification efforts, Turkey remains dependent on Russian gas, which accounted for 42.3% of total imports in 2024, creating political tensions with the EU. This dual reality highlights the complexity of Turkey's position: while indispensable for European energy security, it faces structural vulnerabilities that influence its political leverage and cooperation with the EU. Agreements with neighboring countries, such as Georgia, further strengthen Turkey's transit capacity, enabling alternative energy routes and enhancing regional resilience. However, divergent energy policies, reliance on fossil fuels, and geopolitical alignments limit the potential for energy cooperation to fully resolve broader political disputes. This study demonstrates that Turkey's growing energy role has both economic and political implications, reinforcing its importance in European energy security while simultaneously generating challenges for EU–Turkey relations.

Keywords: *Turkey, European Union, energy security, Southern Gas Corridor, Georgia, energy transit.*

The ongoing conflict between Russia and Ukraine has fundamentally reshaped political, security, and energy dynamics across Europe, exposing the vulnerabilities inherent in over-reliance on a single energy supplier. Prior to the outbreak of war, Turkey, Russia, Ukraine, and the European Union formed a regional energy framework shaped primarily by transmission lines traversing Ukraine and Turkey. This framework allowed for relatively stable flows of natural gas and electricity between producers and consumers, forming a complex network of interdependent regional energy relations.[1] The war, however, has disrupted these networks, highlighting the urgent necessity of alternative energy corridors and underscoring Turkey's growing strategic importance as a transit hub.

Turkey occupies a unique geostrategic position between major energy-producing regions and energy-consuming states. Its territory provides the most feasible routes for transporting Caspian, Middle Eastern, and other southern and eastern energy resources to European markets. For the European Union, ensuring Turkey's cooperation and stability

[1]Murat N Arman and Baris Gursoy, "Challenges in The Regional Energy Complex of Russia, Ukraine, Turkey, and the European Union," International Journal of Humanities and Social Development Research 6(1) (2022): 11, accessed July 24, 2025, DOI: 10.30546/2523-4331.2022.6.1.7

along these routes is critical, both to diversify energy supplies and to maintain geopolitical stability. The Southern Gas Corridor, operational since December 2020, exemplifies this strategic interconnection, linking Azerbaijan, Georgia, Turkey, Greece, Albania, and Italy through the South Caucasus Pipeline Extension, the Trans-Anatolian Pipeline, and the Trans-Adriatic Pipeline. The corridor has experienced rapid growth, with gas flows increasing by 44% between 2021 and 2024, demonstrating the tangible impact of infrastructural diversification on reducing dependence on Russian energy.[2]

Energy security has increasingly become a central pillar of dialogue between Turkey and the European Union, evolving from a pragmatic cooperation platform into a key determinant of political and economic alignment. This evolution has been influenced by multiple factors, including Russia's annexation of Crimea in 2014, the ongoing conflict in Ukraine, and the EU's broader decarbonization agenda under the European Green Deal. Turkey's domestic energy landscape, characterized by substantial coal reserves, significant hydroelectric potential, and ongoing nuclear development, positions the country not only as a transit hub but also as an emerging regional energy power in its own right. At the same time, EU decarbonization policies aiming for climate neutrality by 2050,[3] contrasted with Turkey's current dependence on fossil fuels for approximately 80% of its energy needs and its net-zero target set for 2053,[4] highlight an area of policy tension with implications for political dialogue.

Turkey's energy sector has undergone a remarkable transformation over the last two decades, reflecting rapid economic growth and a corresponding surge in energy demand. Between 2000 and 2020, electricity consumption in Turkey increased by approximately 90%, while natural gas consumption doubled.[5] By 2024, gas-fired power plants accounted for 18.9% of total electricity generation, hydroelectric plants 21.1%, and coal-fired plants 34.7%.[6] In addition, Turkey's cooperation with Russia in constructing the Akkuyu Nuclear Power Plant in Mersin illustrates the country's strategy to diversify energy sources and increase domestic production capacity. By February 2025, the containment structure of the fourth reactor unit was completed, with full operation projected by 2028,[7] supplying approximately 10% of Turkey's total electricity demand.[8]

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[2] "Diversification of gas supply sources and routes," European Commission, Accessed July 24, 2025, https://energy.ec.europa.eu/topics/energy-security/diversification-gas-supply-sources-and-routes_en

[3] "2050 long-term strategy," European Commission, Accessed July 24, 2025. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en

[4] "Paris Agreement," Directorate of Climate Change of Turkey, Accessed July 24, 2025. https://iklim.gov.tr/en/paris-agreement-i-117

[5] "Petrol ve Doğal Gaz Sektör Raporu," Türkiye Petrolleri A.O. Accessed July 24, 2025. https://www.tpao.gov.tr/file/2405/tpao-2023-petrol-ve-dogal-gaz-sektor-raporu-19746659d1d4d2383.pdf

[6] "Elektrik," T.C. Enerji ve Tabii Kaynaklar Bakanlığı, Accessed August 4, 2025. https://enerji.gov.tr/bilgi-merkezi-enerji-elektrik

[7] "Hadefımız 2028'de 4 Reaktörün de devreye Girmesi," T.C. Enerji ve Tabii Kaynaklar Bakanlığı, Accessed August 4, 2025 https://enerji.gov.tr/haber-detay?id=21352

[8] "Akkuyu Nükleer Güç Santrali Projesi," T.C. Enerji ve Tabii Kaynaklar Bakanlığı, Accessed August 4, 2025. https://enerji.gov.tr/neupgm-akkuyu-nukleer-guc-santrali-projesi

Despite these developments, EU concerns regarding the Akkuyu project illustrate the complex intersection of energy security, safety, and geopolitical considerations. The European Nuclear Safety Regulators Group conducted a peer review in 2024, issuing recommendations for additional safety measures.[9] Cyprus and Greece have repeatedly raised objections to the project, citing its proximity to seismic fault lines, environmental risks in the eastern Mediterranean, and inadequate consultation with neighboring states. These concerns have been voiced both in EU forums and at the International Atomic Energy Agency, particularly following the 2023 earthquakes in Turkey.[10] While the Akkuyu NPP is only one factor among many influencing EU–Turkey relations, it has become emblematic of the broader challenges inherent in balancing energy cooperation with political and safety considerations.

The Russia–Ukraine war has accelerated the EU's diversification efforts, highlighting the urgency of securing alternative energy routes and increasing the importance of transit countries like Turkey. Turkey's role as an energy bridge is further reinforced by the Southern Gas Corridor, which enables European access to Caspian resources while reducing dependence on Russian gas. In parallel, Georgia's strategic location and hydropower potential position it as a valuable partner in emerging energy transit networks, with ongoing infrastructure projects and new agreements, such as the 2025 Memorandum of Understanding with Turkey and the Coordinated Auction Office in South-East Europe, formalizing its integration into regional energy frameworks.[11]

This study seeks to analyze Turkey's evolving strategic role in European energy security, the political and economic implications of the Russia–Ukraine war, and the emerging significance of Georgia as a regional energy transit state. The research aims to assess whether increased energy cooperation can influence broader political relations and contribute to regional stability, while also identifying the structural, policy, and geopolitical constraints that continue to shape these dynamics.

Findings and Discussion

Turkey's geostrategic location makes it a central node in European efforts to diversify energy sources, particularly in light of the disruptions caused by the Russia–Ukraine conflict. By facilitating the transit of Caspian and Middle Eastern natural gas, Turkey enables the EU to reduce dependence on Russian energy while promoting a more competitive regional

[9] "Joint press release by the European Nuclear Safety Regulators Group," European Nuclear Safety Regulators Group, Accessed August 4, 2025. https://www.ensreg.eu/news/joint-press-release-european-nuclear-safety-regulators-group-%E2%80%93-nuclear-regulatory-authority?utm_source=chatgpt.com

[10] Council of the European Union, *Information Note: Construction and Operation of the Akkuyu Nuclear Power Plant on the Southern Coast of Türkiye – Ensuring Nuclear Safety (Information from the Cyprus Delegation)*, Brussels, 14 June 2023, document 10476/23, https://data.consilium.europa.eu/doc/document/ST-10476-2023-INIT/en/pdf?utm_source=chatgpt.com

[11] "Memorandum was Signed Between Georgian State Electrosystem, TEİAŞ and SEE CAO," Georgian State Electrosystem. Accessed July 24, 2025. https://www.gse.com.ge/communication/news/2025/Memorandum-was-Signed-Between-GSE-TEIAS-and-SEECAO

energy market. The Southern Gas Corridor, connecting Azerbaijan through Georgia and Turkey to Southern Europe, exemplifies how infrastructural development can directly influence energy security and geopolitical alignment. The rapid increase in gas flows through the corridor between 2021 and 2024 demonstrates the effectiveness of coordinated regional investment in mitigating reliance on a single supplier and highlights the importance of stable transit routes.[12]

Following the launch of the Southern Gas Corridor, Turkey became an increasingly valuable partner for the European Union in the field of energy security. According to the Turkish Statistical Agency, the country's GDP grew by 5.1% in 2023.[13] This economic expansion directly affected electricity consumption: in 2024, Turkey generated 354,570 GWh of electricity, representing a 7.1% increase compared to 2023, when production stood at 286,892 GWh.[14] Since natural gas plays a vital role in Turkey's electricity generation, the country has been compelled to increase its imports from the Russian Federation. In 2024, Russian natural gas accounted for 42.3% of Turkey's total gas imports.[15] This dependency has also emerged as a point of political tension with the European Union.

Turkey's domestic energy sector complements its transit function, providing significant generation capacity through coal, hydroelectric, and nuclear power sources. The construction of the Akkuyu Nuclear Power Plant in collaboration with Russia illustrates Turkey's long-term strategy to diversify energy production, increase domestic supply, and reduce vulnerability to external shocks. However, this project has also highlighted the complex interplay between energy policy, environmental safety, and regional diplomacy. EU concerns regarding seismic risks and environmental impacts, voiced by both member states and regulatory bodies, underscore the broader political implications of energy infrastructure projects and demonstrate that energy security initiatives cannot be divorced from political and environmental considerations.

The EU's decarbonization agenda further complicates Turkey–EU energy relations. The European Green Deal establishes a pathway toward climate neutrality by 2050, requiring member states and partner countries to significantly reduce greenhouse gas emissions.[16] Turkey, while committed to reaching net-zero emissions by 2053 under the Paris Agreement, continues to rely heavily on fossil fuels, creating a divergence in long-term energy strategies.[17] This divergence illustrates one of the central challenges for energy-based cooperation: while Turkey's geographical position is indispensable for transit, its energy policy priorities do not fully align with EU objectives, generating potential tension in the political dimension of their relationship.

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[12] "Diversification of gas supply sources and routes."

[13] "Yıllık Gayrisafi Yurt İçi Hasıla, 2023," Türkiye İstatistik Kurumu. Accessed August 5, 2025. https://data.tuik.gov.tr/Bulten/Index?p=Yillik-Gayrisafi-Yurt-Ici-Hasila-2023-53450

[14] "2025 Yılı Aylık Elektrik Üretim-Tüketim Raporları," TEİAŞ. Accessed August 5, 2025. https://www.teias.gov.tr/aylik-elektrik-uretim-tuketim-raporlari

[15] "Türkiye'nin doğal gaz ithalatı geçen yıl yüzde 7,64 azalışla 50,48 milyar metreküp oldu," Anadolu Agency. Accessed August 5, 2025. https://www.aa.com.tr/tr/ekonomi/turkiyenin-dogal-gaz-ithalati-gecen-yil-yuzde-7-64-azalisla-50-48-milyar-metrekup-oldu/3253890

[16] "2050 long-term strategy."

[17] "Paris Agreement"

Georgia's strategic position and energy potential have gained increasing significance in this context. The country possesses substantial hydropower capacity, which, in conjunction with its geographic location, enables it to act as a conduit for energy flows between the Caspian, the South Caucasus, and Turkey. Existing cross-border infrastructure allows for the export of surplus electricity from Georgia to Turkey during the spring and summer months, while Turkey can provide supplementary energy during periods of seasonal low water levels. Planned expansions, such as the 400 kV Akhaltsikhe–Tortum line, will enhance reliability and increase export capacity, integrating Georgia more closely into the European energy network.[18] The 2025 Memorandum of Understanding between Georgia's State Electrosystem, Turkey's TEİAŞ, and the SEE CAO formalizes this collaboration, providing a framework for coordinated capacity allocation and the use of joint auction platforms for cross-border electricity transmission.[19] These developments position Georgia as a key regional player, complementing Turkey's role as a central transit hub and enhancing the resilience and flexibility of energy networks connecting the Caspian and Europe.

The Russia–Ukraine war has catalyzed broader regional transformations in energy policy. European sanctions against Russia, coupled with the EU's accelerated diversification efforts, have elevated Turkey's role as a strategic partner. Simultaneously, Turkey has maintained balanced political and economic relations with Russia, pursuing its own energy projects and fostering new trade routes, demonstrating a degree of autonomy that raises concerns within the EU. This dual approach—facilitating EU energy security while engaging independently with Russia—highlights the complexity of Turkey's strategic positioning and the limited leverage the EU possesses over Ankara's political choices.

Energy security, therefore, operates as both a unifying and a constraining factor in Turkey–EU relations. On one hand, the shared interest in securing stable, diversified energy supplies provides a platform for cooperation, investment, and infrastructural development. On the other hand, divergences in decarbonization strategies, reliance on fossil fuels, and independent foreign policy priorities limit the extent to which energy cooperation can translate into broader political integration. While Turkey's strategic significance is indisputable, the potential for energy transit to drive political rapprochement remains contingent upon the resolution of structural and policy-level divergences.

Conclusion

The Russia–Ukraine conflict has underscored the vulnerabilities of European energy security and emphasized the necessity of diversified supply routes. Turkey, situated at the crossroads of major energy-producing regions and Europe, has emerged as a critical transit hub for Caspian and Middle Eastern resources. Its domestic energy capacity, including coal, hydroelectric, and nuclear power, enhances its role as a regional energy power, complementing its transit function and increasing its strategic relevance for the EU.

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[18] "Construction of Overhead Transmission Lines Tskaltubo-Akhaltsikhe and Akhaltsikhe-Tortum," Georgian State Electrosystem, Accessed July 5, 2025. https://www.gse.com.ge/projects/international-projects/ENIP/Construction-of-OHLs-Tskaltubo-Akhaltsikhe-and-Akhaltsikhe-Tortum

[19] "Memorandum was Signed Between Georgian State Electrosystem, TEİAŞ and SEE CAO."

Georgia's growing integration into regional energy networks, through its hydropower potential and enhanced cross-border transmission infrastructure, further strengthens the resilience and flexibility of these corridors. Agreements such as the 2025 Memorandum of Understanding between Georgia, Turkey, and SEE CAO formalize the mechanisms for coordinated cross-border energy trade and highlight the increasing interdependence of the region.

Despite these strategic advantages, multiple challenges persist. Divergent energy policy objectives, particularly regarding decarbonization timelines, ongoing reliance on fossil fuels, and complex geopolitical alignments, limit the extent to which energy cooperation can foster deeper political integration. EU concerns over the Akkuyu Nuclear Power Plant and Turkey's independent energy diplomacy with Russia exemplify the multidimensional tensions that continue to shape the regional energy landscape.

Ultimately, Turkey's geostrategic location, combined with its domestic energy capacity and collaborative infrastructure projects with neighboring countries, positions it as a central actor in European energy security. While energy cooperation strengthens interdependence, it alone is insufficient to resolve broader political disputes. Nevertheless, the acceleration of diversification strategies and the development of alternative transit routes in response to the Russia–Ukraine war demonstrate the critical importance of regional energy planning for ensuring stability, resilience, and sustainability in European energy supply. The findings of this study suggest that Turkey's strategic role will remain central in shaping the energy security architecture of Europe, while Georgia's emerging transit capabilities enhance the prospects for a more interconnected and resilient regional energy system.

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7. Georgian State Electrosystem . “Memorandum was Signed Between Georgian State Electrosystem, TEİAŞ and SEE CAO,”. Accessed July 24, 2025. https://www.gse.com.ge/communication/news/2025/Memorandum-was-Signed-Between-GSE-TEIAS-and-SEECAO
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