No 447 | OCTOBER 2025

SEE ENERGY BRIEF

Monthly Analysis

The Role of Azerbaijan in Europe's Energy Security

Introduction

Azerbaijan has emerged as a vital partner in Europe's pursuit of energy security and supply diversification. Situated at the crossroads of the Caspian region and Europe, the country possesses significant natural gas reserves and plays a central role in connecting resource-rich areas to European consumers. Through major infrastructure projects, such as the Southern Gas Corridor, Azerbaijan has established itself as a reliable route for delivering energy resources directly to Europe, bypassing traditional transit countries and reducing dependency on Russian gas. This geographic and strategic advantage has made Azerbaijan an increasingly important actor in Europe's efforts to ensure stable, affordable, and diversified energy supplies.

In recent years, geopolitical developments and disruptions in global energy markets have intensified Europe's need to secure alternative sources of natural gas. Azerbaijan's consistent production, expanding export capacity, and political stability have allowed it to step forward as a dependable supplier during this critical period. Beyond its immediate economic role, Azerbaijan's energy cooperation with the European Union has broader geopolitical significance, fostering regional connectivity, mutual investment, and long-term strategic partnership. As Europe continues to reshape its energy landscape, Azerbaijan's position as a key link between the Caspian and the European markets is likely to remain a cornerstone of the continent's energy security strategy.

This Monthly Analysis gives an account of how and why Azerbaijan has solidified its position as a reliable energy partner to the EU, Türkiye, and other parts of Europe, while accelerating its energy transition to renewable energy sources. Amid growing geopolitical volatility and the urgent need to diversify energy supplies, Azerbaijan's strategic energy diplomacy has included increased fossil fuel exports and significant investments in renewables. The country is thus emerging as a central hub in a new Caspian Green Energy Corridor—a strategic initiative to bolster energy security and diversification, linking Central Asia and Europe via the South Caucasus. Key regional initiatives, including the Black Sea Submarine Cable project (BSSC), support this ambition, as will be explained.

Azerbaijan's Energy Strategy and Evolving Export Policy

The global energy scene has undergone significant transformation in recent years, driven by escalating regional conflicts and growing concerns over energy security. The increasing volatility of oil and gas markets and their impact on electricity prices have heightened the risk of supply disruptions and have underscored the need for stronger regional cooperation and diversification. With its extensive experience and achievements in the energy sector, Azerbaijan is well-positioned to contribute to long-term energy security and sustainability. Alongside the vast energy potential of Central Asia, the broader Silk Road region holds

great promise for developing key transit infrastructure, enhancing regional economic integration, while supplying renewable energy to neighboring countries. Azerbaijan continues to pursue an effective energy strategy and diplomacy focused on increased oil and gas production, expanding renewable energy use, and diversifying its export routes. Recent geopolitical tensions, particularly the war between Russia and Ukraine, have redrawn Europe's traditional energy map, prompting the European Union and other states to strengthen cooperation with reliable external partners and reduce dependence on a single energy source or supplier.

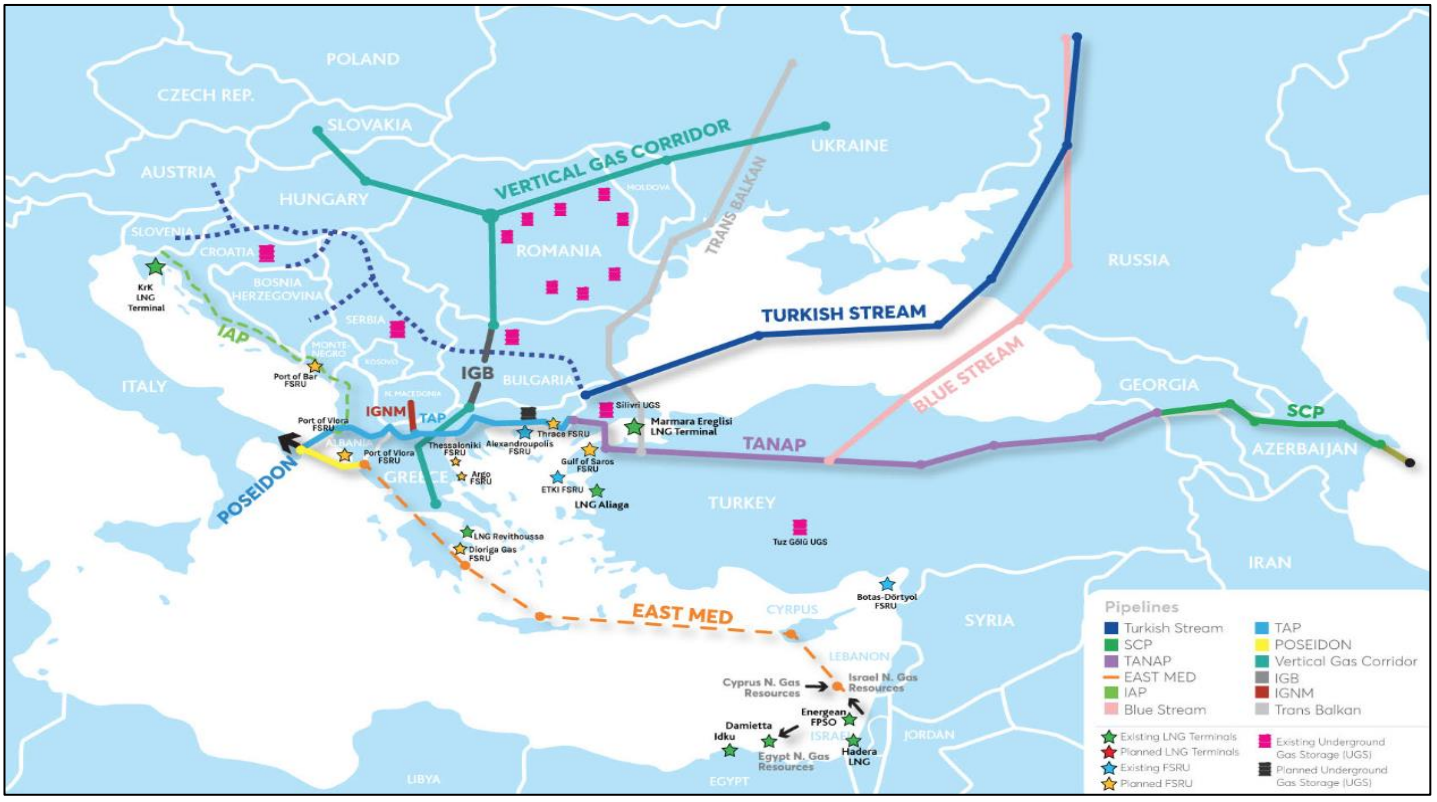
Azerbaijan's energy policy places strong emphasis on expanding natural gas exports. This objective gained further momentum with the signing of the Memorandum of Understanding on a Strategic Partnership in the Field of Energy **(1)** between Azerbaijan and the European Union in July 2022, in Baku. The agreement aims to double the capacity of the Southern Gas Corridor (SGC) to deliver at least 20 billion cubic meters (bcm) of gas annually to the EU by 2027. This initiative supports the EU's diversification goals outlined in the REPowerEU Plan **(2)**, enhances long-term energy security, and aligns with the objectives of the European Green Deal. Importantly, the Memorandum also establishes a long-term framework for cooperation in energy efficiency and renewable energy development. Since its signing, Azerbaijan has accelerated investments in renewable energy projects and formulated a long-term energy strategy focused on electricity and gas supply, efficiency, and integration of renewables. These initiatives are designed to increase electricity generation from clean energy sources and reduce domestic gas consumption in power production, thereby freeing up more gas for export. Ensuring access to and protection of critical energy infrastructure remains a key priority for maintaining secure and uninterrupted energy supplies to global markets.

The Southern Gas Corridor (SGS) as a Cornerstone of the EU's Energy Diversification

The energy sector holds a central position in Azerbaijan's economy, driven largely by the country's abundant natural resources. Fossil fuels remain the backbone of Azerbaijan's energy production, with natural gas playing a particularly important role. It is widely recognized that natural gas will continue to be one of the dominant energy sources in global markets over the next several decades. As a relatively cleaner fossil fuel, natural gas emits less carbon dioxide than coal and serves as an effective transition fuel in the shift toward sustainable energy systems. Moreover, natural gas complements renewable energy sources by balancing fluctuations in solar and wind output and providing rapid responses to spikes in energy demand. For the foreseeable future, the share of natural gas in the European Union's energy mix is expected to remain substantial, consistent with the EU's Green Deal and REPowerEU objectives.

The Southern Gas Corridor (SGC) remains a cornerstone of Azerbaijan's energy infrastructure and a crucial route for delivering natural gas to international markets. Every segment of the SGC represents a significant piece of critical energy infrastructure that opens new opportunities for exporting gas to Türkiye and across the European continent. The project stands as a testament to successful cooperation among all participating countries and has strengthened Azerbaijan's partnerships with Georgia, Türkiye, the European Union, and other European nations. Azerbaijan continues to steadily increase its gas production and exports **(3)**. In the past year, the country produced approximately 50.3 bcm of natural gas, exporting 25.2 bcm, of which 12.9 bcm to the EU, 9.9 bcm to Türkiye and more than 2.4 bcm to Georgia.

Map: The Expanded South Corridor



Source: IENE

The Trans Adriatic Pipeline (TAP), which forms the European section of the SGC, has delivered about 47.22 bcm of natural gas to Europe since commercial operations began in late 2020 **(4)**. Currently, TAP transports more than 28 million cubic meters (mcm) of gas daily to various European destinations. Among these, Italy is the largest consumer of Azerbaijani gas. Gas runs through the TAP pipeline from the Türkiye-Greece border through Albania and beneath the Adriatic Sea before reaching Italy. In 2024, approximately 20% of Azerbaijan's total gas output was exported to Italy **(5)**, making Azerbaijan the country's second-largest gas supplier after Algeria and accounting for around 16% of Italy's total gas imports. Beyond Italy, Azerbaijan supplies natural gas to a growing list of European countries, including Bulgaria, Croatia, Georgia, Greece, Hungary, North Macedonia, Romania, Serbia, Slovakia, Slovenia, and Türkiye. More recently, Germany joined

this group through a ten-year agreement between SOCAR and Securing Energy for Europe (SEFE), under which Azerbaijani gas exports to Germany are expected to gradually increase to 1.5 bcm annually **(6)**.

In this regard, the annual Baku Energy Week stands out as a significant and well-established platform within the global energy sector. Held each year in Azerbaijan, the event plays a key role in promoting international energy cooperation and facilitating trade by bringing together senior government officials, industry leaders, and major stakeholders. The 2025 edition of Baku Energy Week served as a strategic venue for advancing crucial energy partnerships. During the event, BP, SOCAR, and TPAO signed agreements that enabled TPAO to join the Production Sharing Agreement (PSA) for the Shafag-Asiman offshore block in the Caspian Sea **(7)**. Additionally, ExxonMobil concluded an agreement with SOCAR to explore potential onshore oil production projects that could become strategically important for Azerbaijan's energy development **(8)**.

Another major milestone was the final investment decision for the 240 MW Shafag Solar Project, a joint venture between BP, SOCAR Green, and the Azerbaijan Business Development Fund (ABDF), with construction scheduled to begin in the liberated Jabrayil district **(9)**. Once operational, the project will supply renewable electricity to the Sangachal terminal, helping reduce its operational emissions by approximately 50%. These initiatives collectively support Azerbaijan's commitment to diversifying its energy mix, strengthening long-term energy security, and expanding its capacity to produce and export renewable energy. The country's growing focus on sustainable energy sources reflects its alignment with global environmental goals and the transition toward a greener, more resilient energy future.

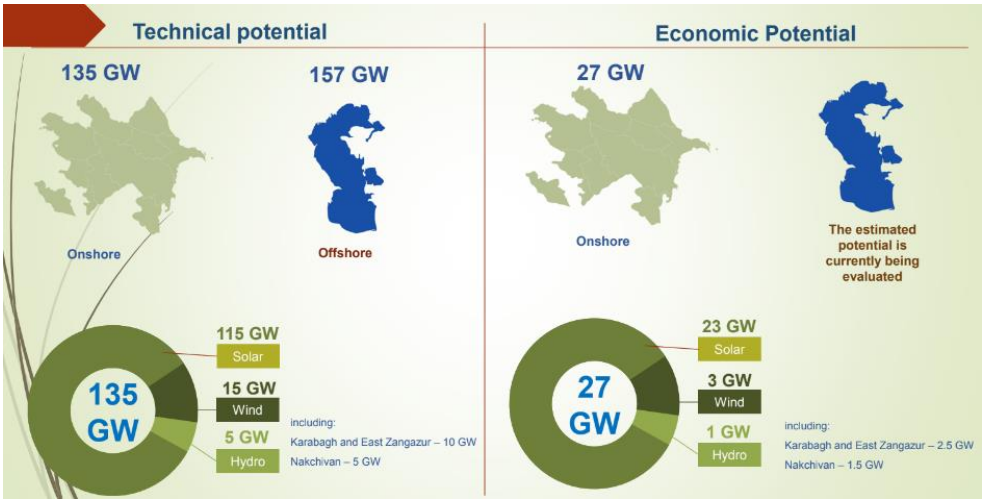
Green Energy Strategy and COP29

Azerbaijan's advantageous geographical location provides it with vast renewable energy potential, particularly in solar, wind, and hydropower resources. Although the country has traditionally relied on fossil fuels, it is now placing growing emphasis on the development of renewable energy in accordance with its national goals and long-term energy strategy. The technical potential of Azerbaijan's renewable resources is estimated at 135 GW onshore and 157 GW offshore, with an economic potential of around 27 GW **(10)**. This includes approximately 3,000 MW of wind energy, 23,000 MW of solar energy, 380 MW of bioenergy, and 520 MW from mountain rivers. Harnessing this potential would not only help conserve natural gas for export but also reduce greenhouse gas emissions and strengthen energy security by diversifying electricity generation sources.

Hosting COP29 in Baku (November 2024) further underscored Azerbaijan's climate ambitions and commitment to global sustainability goals. The event highlighted several key initiatives, such as the Baku Initiative on Climate Finance, Investment, and Trade (BICFIT), the Multisectoral Action Pathways (MAP), and the Climate Finance Action Fund (CFAF), which provides concessional climate finance for vulnerable nations.

Following the Second Karabakh War, Azerbaijan began transforming its liberated territories into Green Energy Zones (GEZs), featuring renewable power generation, smart energy management systems, electric vehicle infrastructure, solar-powered street lighting, and energy-efficient heating and cooling technologies. During COP29, these GEZs and "green corridors" were promoted as central elements of Azerbaijan's renewable energy vision, designed to enhance energy security and foster sustainable economic development **(11)**.

Figure 1: Renewable Energy Potential in Azerbaijan

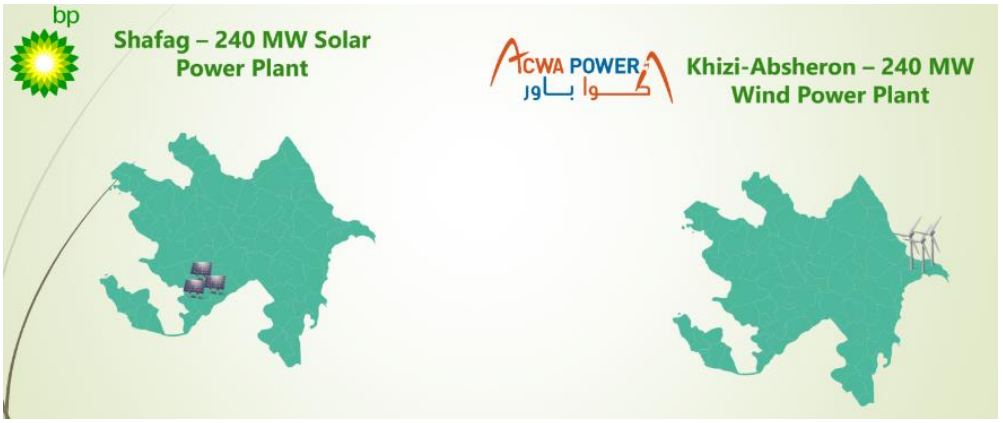


Source: Ministry of Economy of the Republic of Azerbaijan

Azerbaijan's energy strategy places strong emphasis on scaling up renewable energy—particularly solar and wind power—with ambitious targets set for 2030. The government has enacted a renewable energy law, established frameworks for power purchase agreements (PPAs), and introduced incentives to attract green energy investments. A major milestone was reached in 2023 with the inauguration of the 230 MW Garadagh Solar Photovoltaic (PV) Plant **(12)**, the largest facility of its kind in the South Caucasus. Developed through $262 million in foreign investment, the plant is expected to generate around 500 million kilowatt-hours of electricity annually, saving 110 million cubic meters of natural gas and reducing carbon emissions by approximately 200,000 tons each year. Additionally, Azerbaijan has signed multiple agreements with UAE's Masdar for solar and wind projects totaling 1 GW, along with a long-term renewable energy development pipeline of up to 10 GW, further solidifying the country's role as a future leader in green energy production.

Azerbaijan is also advancing the development of the 240 MW Khizi-Absheron Wind Power Plant **(13)**, a major renewable energy project implemented by ACWA Power. Once operational, the plant will generate approximately 1 billion kilowatt-hours of electricity annually, saving around 220 million cubic meters of natural gas and preventing the emission of about 400,000 tons of carbon dioxide each year. Furthermore, ACWA Power has signed a Memorandum of Understanding (MoU) with Masdar and SOCAR to jointly develop 500 MW of renewable energy projects in Nakhchivan, Azerbaijan's largest exclave.

Figure 2: Ongoing Renewable Energy Projects in Azerbaijan



Source: Ministry of Economy of the Republic of Azerbaijan

Building on these achievements, Azerbaijan has made substantial progress in expanding its renewable energy sector. In the past year, renewable energy sources accounted for 13.8% of the country's total electricity production, reflecting a steady upward trend **(14)**. The government aims to increase this share to 30% by 2030, in line with its national energy strategy and sustainability goals.

International partnerships play a crucial role in advancing Azerbaijan's renewable energy ambitions. The country is actively collaborating with leading global companies, such as ACWA Power, Masdar, BP, TEPSCO, China Gezhouba Group, TotalEnergies, Nobel Energy, A-Z Czech Engineering, and Baltech. Through such cooperation, Azerbaijan seeks to strengthen its renewable energy industry, balancing economic growth with environmental responsibility. The growing interest of major international investors underscores Azerbaijan's reliability as a partner and its strong capacity to implement large-scale clean energy projects. Looking ahead, Azerbaijan is well-positioned to play a pivotal role in establishing a renewable energy transportation corridor linking Central Asia with Europe, further enhancing regional energy connectivity and sustainability.

Two Renewable Energy Corridors

Azerbaijan's ambition to become a green energy hub includes the development of infrastructure to transmit electricity generated from renewable energy sources in Central Asia to the European continent. This initiative involves close cooperation with Kazakhstan and Uzbekistan to harness their considerable wind and solar potential. The three countries have signed an agreement establishing a joint venture aimed at coordinating efforts to export surplus renewable electricity from Central Asia to Europe through high-voltage transmission networks **(15)**.

A flagship project advancing this vision is the Black Sea Submarine Cable (BSSC)—a joint initiative between Azerbaijan, Georgia, Romania, and Hungary, supported by the European Commission **(16)**. The BSSC will

establish a high-voltage direct current (HVDC) link connecting the South Caucasus with SE Europe, facilitating the export of renewable electricity from Azerbaijan and Georgia to European markets. Strategically, the BSSC represents a cornerstone for the creation of a wider Green Energy Corridor across the region. Reflecting the project's growing appeal, Bulgaria initiated formal procedures to join the initiative in March 2025, further expanding its regional and geopolitical significance. In addition to energy transmission, the cable will incorporate fiber-optic communication lines, enhancing digital connectivity between the regions. Collectively, the BSSC stands as a major milestone in the evolving energy and technological architecture of the greater Black Sea region.

The Black Sea Submarine Cable (BSSC) is set to transform the energy infrastructure of the broader Silk Road region, while reinforcing Azerbaijan's transition toward a dual-energy export model—maintaining its traditional hydrocarbon exports, while adding a significant renewable energy component. Through this shift, Azerbaijan is helping to shape a new paradigm of energy cooperation between the Silk Road countries and the European Union (EU). Strategically, this initiative carries the potential to establish a comprehensive East–West energy bridge, capable of redefining the structure and dynamics of regional and intercontinental energy relations.

For Azerbaijan, the BSSC fully aligns with its national strategy to diversify energy exports beyond fossil fuels and gain access to the EU's green energy market. The country's apparently vast solar and wind potential can only be effectively leveraged through cross-border infrastructure and secure market connectivity—both of which the BSSC enables. Furthermore, by facilitating the transmission of renewable electricity from Central Asia to Europe, Azerbaijan will, for the first time, emerge as a key energy transit hub. Ultimately, the BSSC will enhance regional energy security, provide alternative export pathways for Central Asian states, and support the EU's Green Deal objectives, contributing to a more sustainable and interconnected Eurasian energy network.

Discussion

Azerbaijan has established itself as a key player in enhancing European energy security, primarily through its significant natural gas resources and strategic infrastructure projects. The development of the Southern Gas Corridor, including the TANAP and TAP pipelines, has enabled Azerbaijan to reliably supply gas to multiple European countries, reducing dependence on traditional suppliers and diversifying Europe's energy sources. By steadily increasing production and exports, Azerbaijan has become a reliable and trusted partner for the EU, providing a stable and secure energy supply that supports both economic stability and geopolitical resilience.

At the same time, Azerbaijan is actively pursuing a transition toward a more diversified and sustainable energy portfolio. With substantial renewable energy potential in solar, wind, hydropower, and bioenergy, the country is expanding its clean energy sector through projects like the Garadagh Solar Plant, Khizi-Absheron Wind Plant, and Green Energy Zones in liberated territories. International partnerships have facilitated large-scale investments, while legal and financial frameworks, including power purchase agreements and incentives, have accelerated the growth of renewable generation. These efforts not only reduce domestic gas consumption and carbon emissions but also allow Azerbaijan to export clean energy to Europe in the future.

Looking ahead, Azerbaijan's vision of becoming a renewable energy hub and a key transit corridor for Central Asian electricity strengthens its strategic role in the European energy landscape. Projects like the Black Sea Submarine Cable (BSSC) and potential Green Energy Corridors provide the infrastructure necessary to connect Central Asia's renewable resources with European markets, positioning Azerbaijan as both a producer and a transit country for clean energy. By combining its hydrocarbon exports with growing renewable capacity, Azerbaijan contributes to a more secure, diversified, and sustainable energy system in Europe, reinforcing its status as a central player in shaping the continent's energy future.

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IENE SEE ENERGY BRIEF MONTHLY ANALYSIS - Issue No. 447 – ISSN:179-9163

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Monthly Analysis is published by the INSTITUTE OF ENERGY FOR SOUTH-EAST EUROPE (IENE)

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