INSTITUTE for DEVELOPMENT and DIPLOMACY

ANALYTICAL POLICY BRIEF

10 October 2025

Azerbaijan's Strategic Energy Transformation

Building a Regional Hub for Fossil Fuels and Renewables

Shahmar Hajiyev

This IDD Analytical Policy Brief gives an account of how and why Azerbaijan has solidified its position as a reliable energy partner to Türkiye, the EU, and other parts of Europe while accelerating its transition to producing energy from renewable 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.

Indeed, Azerbaijan aims to increase renewable power capacity to 30 percent by 2030 and reduce greenhouse gas emissions by 35 percent by 2030 and 40 percent by 2050 compared to 1990 (base year). In short, the country aspires to transform itself into a diverse energy hub, exporting not only fossil fuels but also energy produced from renewable sources.

Azerbaijan's Energy Strategy and Evolving Export Policy

The global energy landscape has been undergoing profound changes in recent times due to escalating regional conflicts and heightened concerns about energy security. The increased volatility of fossil fuel markets and the risk of supply disruptions have

Shahmar Hajiyev is Head of Department at the Center for Analysis of International Relations (AIR Center). He is also Vice-Chairman of the Azerbaijan-China Cooperation Public Union.

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.

emphasized the urgent need for diversification of supply and a transition to energy produced from renewable sources. In this context, the export of both fossil fuels and green energy has become an integral part of the conception and execution of Azerbaijan's energy strategy.

Given Azerbaijan's extensive experience and achievements in the energy sector, further regional cooperation will support long-term energy security and sustainability. Together with Central Asia's energy potential, the Silk Road region is well-positioned to develop vital transit infrastructure, support regional economic integration, and supply renewable energy to Türkiye and the European continent, including a growing number of EU member states. The country continues to implement an effective energy strategy and diplomacy, focusing on increasing energy production, expanding the use of renewables, and broadening its export geography. Recent geopolitical tensions, especially the war between Russia and Ukraine, have reshaped the European continent's traditional energy map. Consequently, the EU (as well as other European states) is strengthening cooperation with trusted external partners to reduce its dependency on a single energy source and supplier.

Azerbaijan's energy policy prioritizes the expansion of natural gas exports. This direction gained momentum with the signing of the Memorandum of Understanding on a Strategic Partnership in the Field of Energy with the EU in July 2022 in Baku. The MoU aims to double the capacity of the Southern Gas Corridor (SGC), delivering at least 20 bcm of gas annually to the EU by 2027. This supports the EU's diversification goals, outlined in the EU's REPowerEU Plan, ensures long-term energy security, and accelerates the implementation of the European Green Deal.

Notably, the MoU also highlights the establishment of a long-term partnership on energy efficiency and renewable energy sources. Since the agreement was signed, Azerbaijan has accelerated the development of renewable energy projects. The country is developing a long-term energy strategy that focuses on electricity and gas supply, energy efficiency, and the integration of renewable energy. These efforts aim to increase electricity production from renewable sources and reduce the use of natural gas for power generation, thereby diversifying Azerbaijan's energy exports. To this end, availability and access to critical energy infrastructure, as well as critical infrastructure protection, are essential for uninterrupted and secure energy supplies to global markets.

The SGS as a Cornerstone of the EU's Energy Diversification

The energy sector plays a vital role in Azerbaijan's economy. Driven by its natural resources, the country's energy production is strongly tied to fossil fuels. It should be underlined that natural gas will remain one of the main sources of energy in the global markets for many decades to come. Natural gas is considered, at the very least, to be a "cleaner transition fuel" because it emits less CO_2 than coal. Additionally, natural gas

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.

supports renewable energy sources by compensating for fluctuations in solar and wind supply and rapidly responding to demand surges. For the foreseeable future, the share of natural gas in the EU's energy mix will likely remain high, in alignment with its Green Deal and REPowerEU goals.

The SGC remains a cornerstone of Azerbaijan's energy infrastructure, enabling the delivery of natural gas to foreign energy markets. All segments of the SGC are significant critical energy infrastructure projects that provide new opportunities for the regional export of natural gas to Türkiye and the European continent. The project demonstrated cooperation and integration between all participating countries and deepened Azerbaijan's partnership with Georgia, Türkiye, the EU, and other European states.

Azerbaijan is gradually increasing its natural gas production and exports. Last year, the country produced 50.3 bcm of natural gas. Of this, 12.9 bcm were sold to the EU, 9.9 bcm to Türkiye—with 5.6 bcm transported via the Trans-Anatolian Natural Gas Pipeline (TANAP)—and more than 2.4 bcm to Georgia.

The Trans Adriatic Pipeline (TAP)—the European segment of the SGC—has delivered a total of 47.22 bcm of gas to the European continent since the start of commercial operations in late 2020. TAP daily transports over 28 mcm of gas to European destinations. In this regard, Italy is the leading buyer of Azerbaijani natural gas. Running from the Türkiye-Greece border through Albania and the Adriatic Sea, TAP terminates in Italy. In 2024, Azerbaijan exported around 20 percent of its gas production to Italy. The country was Italy's second-largest gas supplier (after Algeria), accounting for about 16 percent of Italy's total gas imports. In general, countries including Bulgaria, Croatia, Georgia, Greece, Hungary, Italy, North Macedonia, Romania, Serbia, Slovakia, Slovenia, and Türkiye are buyers of Azerbaijani gas. Germany also recently joined the list through a ten-year contract between SOCAR and Securing Energy for Europe (SEFE), with plans to gradually increase annual exports to Germany up to 1.5 bcm.

In this context, it is worth noting the important role of Baku Energy Week—a traditional and well-established platform in the energy sector, held annually in Azerbaijan. This major event plays an important role in energy trade, bringing together high-ranking officials and energy sector stakeholders. For instance, Baku Energy Week 2025 served as a strategic platform for building essential energy partnerships. During the event, bp, SOCAR, and TPAO signed agreements enabling the latter to join the Production Sharing Agreement (PSA) for the Shafag-Asiman offshore block in the Caspian Sea. Additionally, ExxonMobil signed an agreement with SOCAR to explore what could become a strategic onshore oil production endeavor. A final investment decision was also made for the 240 MW Shafag Solar Project—a joint venture between bp, SOCAR Green, and the Azerbaijan Business Development Fund (ABDF) with construction set to begin in the liberated Jabrayil district. This project will enable the Sangachal terminal to use renewable electricity generated by this solar plant, which will support the reduction of operational emissions by around 50 percent in the future.

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.

All these agreements support Azerbaijan's target to diversify its energy mix, ensure long-term energy security, and both produce and export energy from renewable sources. Its growing focus on the latter aligns with broader sustainability goals.

Green Energy Advancement and COP29

Azerbaijan's favorable geographical location provides substantial renewable energy resources, particularly in solar, wind, and hydropower. While traditionally reliant on fossil fuels, Azerbaijan is now prioritizing renewable energy development in line with national goals and its energy strategy.

The technical potential of Azerbaijan's onshore renewable energy sources is 135 GW onshore and 157 GW offshore. The economic potential is estimated at 27 GW, including 3,000 MW of wind energy, 23,000 MW of solar energy, 380 MW of bioenergy, and 520 MW from mountain rivers. This potential would help the country save natural gas for exports and reduce greenhouse gas emissions, while improving electricity security by diversifying generation.

Also, hosting COP29 in Baku underlined Azerbaijan's climate ambitions. The event promoted initiatives like the Baku Initiative on Climate Finance, Investment, and Trade (BICFIT), the Multisectoral Action Pathways (MAP), and the Climate Finance Action Fund (CFAF), which supports highly concessional climate finance for vulnerable countries. After the Second Karabakh War, the liberated territories are being developed as Green Energy Zones (GEZ), featuring renewable electricity generation, smart energy management, electric vehicle use, solar-powered street lighting, and efficient heating and cooling systems. At COP29, GEZ and "green corridors" were promoted as focal points for renewable energy projects that enhance energy security and foster sustainable economic growth.

Azerbaijan's Energy Strategy places a significant emphasis on renewable energy, particularly on solar and wind power, with targets to increase renewable capacity by 2030. Baku has passed a renewable energy law, introduced mechanisms for power purchase agreements, and implemented incentives for green energy investments. In 2023, the 230 MW Garadagh Solar PV Plant was inaugurated. The solar plant—the largest of its kind in the South Caucasus—was built at the expense of foreign investment worth $262 million. The plant will produce 500 MWh of electricity annually, saving 110 mcm of natural gas. At the same time, carbon emissions into the atmosphere will be reduced by 200,000 tons. Furthermore, Azerbaijan has also signed several agreements with Masdar for solar and wind projects totaling 1 GW and a 10 GW pipeline of renewable energy.

Moreover, Azerbaijan is actively developing the 240 MW Khizi-Absheron Wind Power Plant project. This project, developed by ACWA Power, will annually generate 1 BWh of electricity, allow saving 220 mcm of natural gas per annum, and prevent 400,000 tons

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.

of carbon dioxide emissions. In addition, ACWA Power signed an MoU with Masdar and SOCAR to develop 500MW renewable energy projects in Nakhchivan, Azerbaijan's largest exclave.

Against the background of such developments, the country recorded significant progress in renewable energy last year, with renewables accounting for 13.8 percent of its electricity output. The country aims to generate 30 percent of its electricity from renewables by 2030.

Key international partnerships are essential for the development and advancement of renewable energy sources. Azerbaijan is working actively with ACWA Power, Masdar, bp, TEPSCO, China Gezhouba Group, Total Energies, Nobel Energy, A-Z Czech Engineering, Baltech and other foreign companies in this regard. By deepening cooperation with global players, the country seeks to further develop its renewable energy sector to balance its economic interests with environmental responsibilities. The fact that such significant renewable energy investors are interested in partnering with Azerbaijan speaks to the country's reliability and capacity. Henceforth, Azerbaijan may play an important role in creating a renewable energy transportation route through its territory, thereby connecting Central Asia with the European continent.

Two Renewable Energy Corridors

Azerbaijan's ambition to become a green energy hub includes developing infrastructure to transport electricity generated from renewable sources of energy from Central Asia to the European continent. This includes collaboration with Kazakhstan and Uzbekistan to tap into their wind and solar potential. The three countries signed a document establishing a joint venture to coordinate efforts in exporting surplus renewable electricity from Central Asia to the European continent via high-voltage transmission infrastructure.

A key project supporting this vision is BSSC—a joint initiative of Azerbaijan with Georgia, Romania, and Hungary, and supported by the European Commission. The project will create a high-voltage direct current cable (HVDC) connecting the South Caucasus to Southeast Europe. BSSC supports renewable electricity exports from Azerbaijan and Georgia to the European continent and, strategically, BSSC may serve as a foundational element for a broader Green Energy Corridor. Notably, Bulgaria initiated formal procedures to join the initiative in March 2025, reflecting growing interest in the project whilst expanding its geopolitical footprint. The cable will also support digital connectivity through integrated fiber-optic lines. BSSC thus marks a strategic milestone in the evolving energy architecture of the wider Black Sea region.

BSSC will help reshape the energy landscape of the Silk Road region and reinforce Azerbaijan's transition toward a dual-energy export model—i.e., retaining the hydrocarbon dimension while adding a renewable one. The country is, therefore,

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.

contributing to the emergence of a new paradigm in energy cooperation between the Silk Road region and the EU. This has the strategic potential of establishing a comprehensive East-West energy bridge capable of fundamentally reshaping the structure and dynamics of the energy landscape of that part of the world.

For Azerbaijan, BSSC aligns with the country's strategy to diversify its energy exports beyond fossil fuels and enter the EU's green energy market. As mentioned, Azerbaijan possesses immense solar and wind potential; capitalizing on this requires cross-border infrastructure and market access, both of which BSSC facilitates. Moreover, by exporting Central Asian energy produced from renewable sources to the EU's energy market, Azerbaijan would also become, for the first time, an important energy transit hub. In sum, BSSC will strengthen regional energy security, provide an alternative export route for Central Asian states, and facilitate the EU's implementation of its Green Deal.

Bottom Line

Azerbaijan continues to implement an effective energy strategy and diplomacy, focusing on increasing the production of energy resources, expanding the use of renewables, and broadening its export geography. The country already supplies increasing levels of oil and gas to Georgia, Türkiye, and a growing number of European states; its strategic energy evolution will enable Baku also to become both an exporter of electricity produced by renewable sources and a "green energy hub" that bridges Central Asia and Europe.

All of this marks a turning point in the regional energy landscape while signaling a new beginning in safe, secure cross-continental energy cooperation. It also ensures that Azerbaijan will emerge as an even more influential player in the EU's energy security efforts and a key catalyst in advancing the European Green Deal.

This policy brief is a part of a series of publications produced within the Jean Monnet Centre of Excellence project "Working towards resilient societies in the EaP: challenges and opportunities for the policy beyond 2020", project number: 101085083, co-funded by the Erasmus+ Programme of the European Union. The views and opinions expressed herein are those of the author only and do not necessarily reflect those of the European Union. Neither the EU nor the granting authority can be held responsible for them.