

## **New Energy Provider of Europe: Azerbaijan**

### **Introduction**

The global energy markets have experienced significant repercussions due to the ongoing Ukraine-Russia war. The war, which has disrupted Russia's oil and gas exports, has introduced heightened uncertainty and volatility in energy prices. Consequently, there has been a growing call for Europe to decrease its dependence on Russian energy sources.

Amidst this shifting landscape, Azerbaijan emerges as a nation that stands to benefit from the altered dynamics. Notably, Azerbaijan has already established itself as a prominent producer of oil and gas, having successfully exported energy to Europe over the past few years. However, the Ukraine conflict has opened up new avenues for Azerbaijan to further augment its energy exports to the European market.

A key development in this regard is the implementation of the Southern Gas Corridor, a substantial infrastructure undertaking designed to transport natural gas from Azerbaijan to Europe. Once fully operational, it will significantly enhance Azerbaijan's capacity to export natural gas to Europe, thereby bolstering its position as a reliable energy supplier.

The potential for Azerbaijan to expand its energy exports to Europe is substantial. Nevertheless, there are several challenges that must be addressed in order for Azerbaijan to fully realize this potential. These challenges include navigating the prevailing political instability in the region, contending with competition from other energy-producing nations, and undertaking the necessary investments in new infrastructure.

Notwithstanding these obstacles, Azerbaijan possesses the inherent capability to emerge as a major energy provider to Europe in the years ahead. The ongoing conflict in Ukraine has presented fresh prospects for Azerbaijan, and the nation is well-poised to capitalize on these opportunities.

### **The war in Ukraine and the EU's goal of reducing its reliance on Russian energy**

On February 24, 2022, the Russo-Ukrainian War precipitated its onset as Russia embarked on a military incursion into Ukraine following an extended period of heightened Russian military presence along Ukraine's territorial confines. This act of aggression has garnered international condemnation, with both the United Nations and a multitude of nations imposing punitive sanctions upon Russia. The conflict in question stands as the culmination of a protracted historical discord between Russia and Ukraine, tracing its origins to the disintegration of the Soviet Union in 1991. A pivotal juncture in this adversarial narrative unfolded in 2014 when Russia annexed the Crimean Peninsula, previously part of Ukraine, and extended its support to pro-Russian separatist elements in the Donbas region situated in eastern Ukraine. The tragic consequence of these hostilities within the Donbas enclave has manifested in an alarming death toll, exceeding 14,000 individuals.(ICG, 2022) The Russian government has proffered a pretext for its Ukrainian incursion, asserting the imperative need to "demilitarize and denazify" the nation. Nevertheless, an array of scholars and analysts postulate that the underlying motivation for this military campaign is grounded in Russia's fervent aspiration to

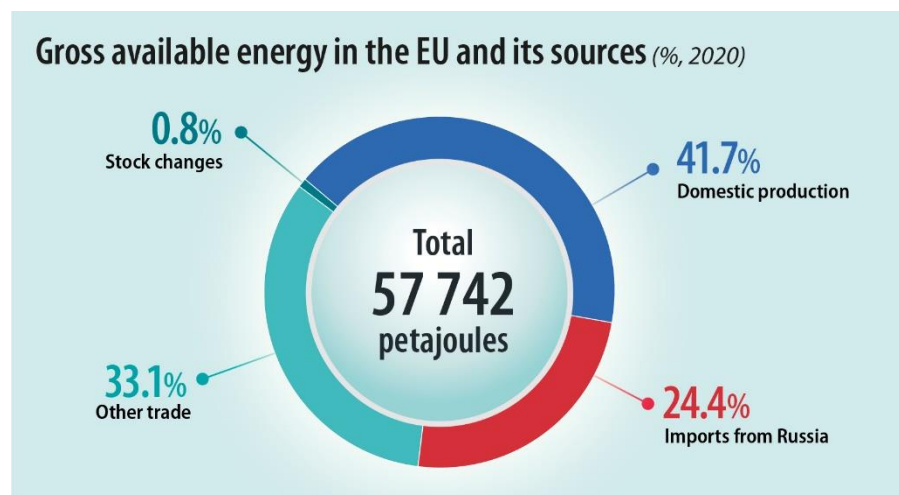
forestall Ukraine's accession into the North Atlantic Treaty Organization (NATO), the venerable transatlantic security alliance. Although the initial phases of the conflict witnessed substantial territorial advances by the Russian military, they encountered tenacious opposition from the Ukrainian armed forces and civilian populace. Consequently, the war has engendered a humanitarian calamity within Ukraine, triggering the displacement of a multitude, numbering in the millions, from their cherished homesteads.

The beyond impact of the war can be observed with the words of Antony Blinken, the US Secretary of State as he mentioned "... that's why the United States and our allies and partners in Europe have been so focused on what's happening in Ukraine. It's bigger than a conflict between two countries. It's bigger than Russia and NATO. It's a crisis with global consequences, and it requires global attention and action..." (U.S. Department of State, 2022).

Indeed, in addition to creating a humanitarian crisis and a major geopolitical crisis in the region, the war has dramatically affected the European energy market.

Thus, the fact that European countries are largely dependent on Russia in the context of energy and the sanctions imposed against Russia from the beginning of the war have brought up the issue of revising the energy agenda in Europe. Roughly 40% of natural gas within the European region originates from Russia (NPR, 2022). Approximately one-third of the European natural gas demand, earmarked for purposes encompassing electricity generation, industrial production, and winter heating, is met through Russian supply channels. Furthermore, the European Union (EU) is notably reliant on Russian fossil fuel sources, with over 25% of its crude oil imports sourced from Russia. In the year 2021, the EU recorded an average daily importation of more than 380 million cubic meters (mcm) of natural gas via pipeline from Russia, translating to an annual intake of approximately 140 billion cubic meters (bcm). In addition to this, approximately 15 bcm was procured in the form of liquefied natural gas (LNG).

In 2020, the European Union relied on imports to meet 57.5% of its energy consumption, with domestic production and inventory adjustments accounting for only 42.5% of its energy requirements. Notably, Russia held the position of the primary provider of natural gas, oil, and coal to the EU during this period, exporting 24.4% of EU energy needs. (Eurostat, 2022)



One month following the commencement of hostilities, the International Energy Agency unveiled comprehensive decalogue of strategic measures. This array of initiatives encompassed refraining from entering fresh gas procurement agreements with Russia, diversifying gas sourcing from alternative outlets, instituting regulatory mechanisms to augment market equilibrium, stipulating mandates for maintaining a minimum gas reservoir, amplifying the production of wind and solar energy, optimizing the potential of environmentally low-impact reservoirs such as bioenergy and nuclear power, executing short-term measures to shield vulnerable electricity consumers from exorbitant pricing, expediting the transition from gas-fired boilers to more efficient heat pumps, enhancing energy efficiency within edifices and manufacturing facilities, endorsing provisional thermostat adjustments by consumers, and cultivating the adaptability of power grids within the framework of carbon-neutral energy sources (International Energy Agency, 2022).

According to the data provided by Eurostat, while the export of oil and oil products from Russia Europe was 40 billion 280 million tons in the first quarter of 2021, and the export of natural gas was 22 billion 137 million cubic meters, in the first quarter of 2023 oil and oil products export fell to 7 billion 574 million tons, natural gas export fell to 7 billion 879 million cubic meters, which means a decline of 81% and 64%, respectively.

Figure 1. Oil and oil products quarterly exported from Russia to the European Union in the last 2 years (thousand tons)

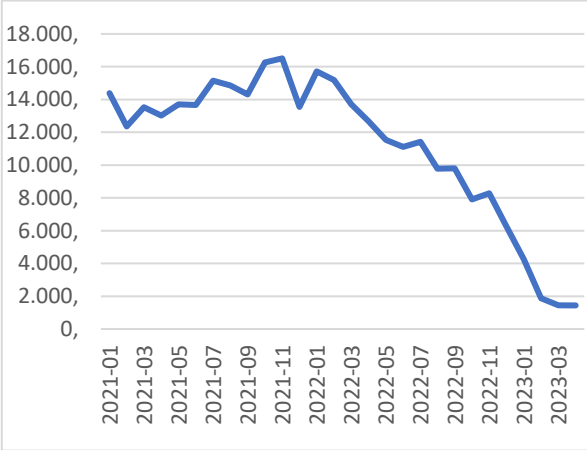
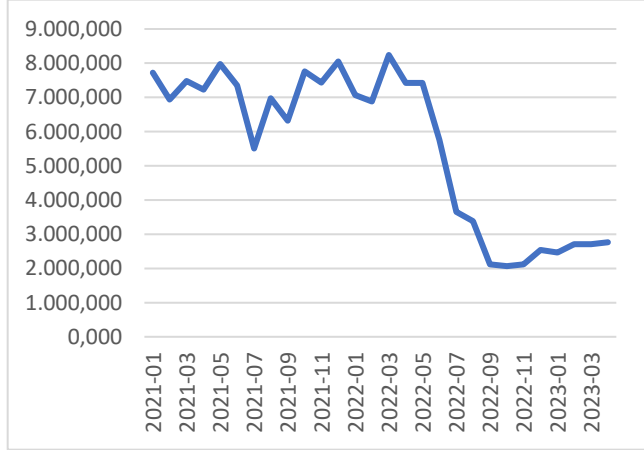


Figure 2. Natural gas quarterly exported from Russia to the European Union in the last 2 years (million cubic metres)



## The Southern Gas Corridor and its potential

As an initiative of European Commission, the Southern Gas Corridor serves the purpose of facilitating the export of natural gas produced in the second phase of the Shah Deniz gas condensate field (EC, 2021). Initially, it aims to export this gas to Turkey and subsequently to Southern Europe, accomplished through the expansion of the South Caucasus Gas Pipeline, TANAP, and TAP. The Shah Deniz Stage 2 project, a significant endeavor within the larger Shah Deniz project, plays a pivotal role in delivering Azerbaijani gas to Europe and Turkey. This gas will then be channeled to European markets through the Southern Gas Corridor, enhancing the energy security of the regions and nations receiving the gas.

**Map: the Southern Gas Corridor, July 2018**



In 2011, the European Union and Azerbaijan entered into a Joint Declaration aimed at promoting the establishment of direct gas conduits from the Caspian region to Europe (EC, 2011). This Joint Declaration, in conjunction with Intergovernmental Agreements governing the Trans-Anatolian Pipeline (TANAP) and the Trans-Adriatic Pipeline (TAP), paved the way for the negotiation of long-term gas sales contracts. On June 27, 2012, the agreement for TANAP was formally inked by President Ilham Aliyev of the Republic of Azerbaijan and Turkish Prime Minister Recep Tayyip Erdogan. The cornerstone for the Southern Gas Corridor was laid on September 20, 2014. Subsequently, on March 17, 2015, a groundbreaking ceremony was conducted in Kars, Turkey, marking the commencement of pipeline construction for TANAP. A similar groundbreaking event for TAP occurred on May 17, 2016, in Saloniki, Greece, ushering in the construction phase for that pipeline. The official inauguration of the Southern Gas Corridor took place on May 29, 2018, in Baku, and an integral component of this corridor, the Trans-Anatolian Pipeline (TANAP), was inaugurated in Eskişehir on June 12. On June 30, 2018, the Trans-Anatolian (TANAP) pipeline saw the transportation of its first commercial gas shipment to Turkey. Subsequently, on November 30, 2019, an inauguration ceremony

was held for the section of the TANAP gas pipeline that connects to Europe. The supply of Azerbaijani natural gas to the European market via TAP commenced on December 31, 2020.

In late 2020, the European Commission initiated the Southern Gas Corridor project, which successfully transported 8.1 billion cubic meters (bcm) of gas to Europe in 2021 and increased this volume to 11.4 bcm in 2022. These figures correspond to 2.4% and 3.4%, respectively, of the total gas imports into the European Union. It is anticipated that gas shipments through the Southern Gas Corridor will maintain a consistent level of 12 bcm in 2023 (EC, 2021).

However, Azerbaijan's energy exports to Europe, including sustainable energy, in the coming years indicate a decrease in its dependence on the Russian energy market to a large extent.

## **Recommendations for policy makers in Europe**

As Europe seeks to reduce its dependence on Russian energy, there are several strategic recommendations for policymakers:

### **- Diversify Energy Sources:**

Diversifying Europe's energy sources is not just a strategic move; it's a pathway to resilience and sustainability. By embracing a diverse energy mix that includes renewables, nuclear power, and tapping into alternative gas suppliers like Azerbaijan, Europe can significantly enhance its energy security. This diversification acts as a safety net, reducing vulnerability to supply disruptions that can arise from geopolitical tensions or market fluctuations.

When we talk about renewables, we're not merely referring to solar and wind power. Europe can invest in a broad spectrum of renewable energy sources, such as hydropower, geothermal, and biomass. Expanding the portfolio of clean energy options ensures a stable and eco-friendly energy supply, reducing greenhouse gas emissions and mitigating climate change.

The transition to renewable energy isn't just about reducing dependence on fossil fuels; it's also an opportunity for job creation and technological advancement. Policymakers can foster innovation in renewable energy technologies and create incentives for businesses and individuals to invest in clean energy solutions. These incentives can take the form of tax breaks, subsidies, or favorable regulatory frameworks.

Moreover, fostering a culture of energy efficiency should be at the forefront of this effort.

Incentivizing and regulating energy-saving technologies in industry, transportation, and households can lead to significant reductions in energy consumption. This, in turn, reduces the reliance on external energy suppliers and contributes to energy independence. The road to a diversified energy future requires long-term planning, investment, and collaboration. Europe must continue to lead in this global energy transition, setting an example for other regions to follow.

### **- Invest in Infrastructure:**

Investing in energy infrastructure is not merely a financial commitment; it's an investment in Europe's energy sovereignty and economic stability. To accommodate gas from alternative suppliers like Azerbaijan, European nations must embark on a robust infrastructure development journey.

The expansion of pipeline networks and the construction of liquefied natural gas (LNG) terminals are vital components of this effort. These projects not only facilitate the transport and storage of Azerbaijani gas but also create jobs and stimulate local economies. By investing in LNG

infrastructure, Europe can bolster its capacity to receive gas from diverse sources and adapt to changing market conditions.

The benefits of infrastructure investment extend beyond energy security. Building new pipelines and terminals requires engineering expertise, creating employment opportunities in construction and maintenance. Additionally, these projects often involve collaboration with international partners, fostering diplomatic and economic ties.

Furthermore, as Europe transitions to cleaner energy sources, infrastructure investments should align with sustainability goals. This includes designing energy facilities that have minimal environmental impact and are resilient to the challenges posed by climate change.

In sum, investing in energy infrastructure is a multifaceted strategy that not only enhances energy security but also contributes to economic growth, job creation, and sustainable development.

Europe's commitment to this endeavor is an investment in its future prosperity.

### **- Strengthen Energy Efficiency:**

Strengthening energy efficiency is the low-hanging fruit in the quest for energy security and sustainability. It's a multifaceted approach that spans industries, transportation, and households, offering numerous advantages beyond energy savings.

**Industry:** Industries can reduce energy consumption by adopting state-of-the-art technologies, optimizing processes, and implementing energy-efficient practices. This not only decreases energy costs but also enhances competitiveness and reduces the carbon footprint of manufacturing processes.

**Transportation:** Energy-efficient transportation solutions, such as electric vehicles and improved public transportation networks, can reduce both energy consumption and emissions. Policymakers can incentivize the adoption of electric vehicles through tax incentives, subsidies, and charging infrastructure development.

**Households:** Energy-efficient appliances, insulation, and smart home technologies enable households to reduce their energy consumption. Incentives for homeowners to invest in energy-saving measures, such as energy-efficient windows or solar panels, can lead to substantial energy savings and lower utility bills.

Regulations and standards play a pivotal role in driving energy efficiency across these sectors. Policymakers should establish and enforce strict energy efficiency standards, creating a market environment where energy-efficient solutions are the norm rather than the exception.

Ultimately, a concerted effort to strengthen energy efficiency can reduce Europe's reliance on external energy suppliers, enhance energy security, lower energy bills for consumers, and contribute to a more sustainable future.

### **- Promote Renewable Energy:**

Promoting renewable energy is not just about reducing Europe's dependence on fossil fuels; it's about shaping a sustainable and resilient energy future. Accelerating the transition to renewable energy sources is a multifaceted endeavor with far-reaching benefits.

The diversification of energy sources with renewables like solar, wind, hydro, geothermal, and biomass can significantly reduce Europe's vulnerability to supply disruptions and price fluctuations. These sources are inherently domestic, reducing the reliance on energy imports and promoting energy independence.

Policymakers should offer substantial incentives and support for renewable energy projects. This support can take various forms, including financial incentives, research and development grants, and

streamlined permitting processes. By fostering an environment where renewable energy projects thrive, Europe can attract investment, create jobs, and promote technological innovation. Moreover, investing in renewable energy aligns with Europe's commitment to combat climate change. Reducing greenhouse gas emissions by transitioning to clean energy sources is essential for meeting climate targets and securing a sustainable future. As renewable energy capacity grows, Europe should also invest in a robust grid infrastructure capable of handling intermittent energy sources. This includes smart grids, energy storage solutions, and interconnections between regions to balance supply and demand. In conclusion, promoting renewable energy is a transformative strategy that not only reduces reliance on fossil fuels but also bolsters energy security, fosters economic growth, and combats climate change.

#### **- Engage in Diplomacy:**

Diplomacy is the linchpin of securing stable energy supplies from non-Russian sources like Azerbaijan. Continued diplomatic efforts are essential for fostering cooperation, negotiating agreements, and building strategic partnerships.

Bilateral agreements are a cornerstone of energy diplomacy. Europe should engage in negotiations with energy-rich nations to secure long-term energy contracts. These agreements provide stability and predictability for both suppliers and consumers. Partnerships with transit countries are equally crucial. Countries through which energy pipelines pass play a pivotal role in ensuring the uninterrupted flow of energy resources. Diplomatic efforts should focus on maintaining stable relations with these transit nations. Energy diplomacy is also an opportunity for Europe to promote its values and standards. By engaging in ethical and sustainable energy practices, Europe can influence the global energy landscape and set an example for responsible energy production and consumption. Beyond bilateral agreements, multilateral cooperation is essential. Collaborative initiatives at the European Union level can help coordinate energy policies and ensure a unified approach to securing non-Russian energy sources. Furthermore, energy diplomacy extends to fostering research and technology partnerships. Europe can collaborate with energy-rich nations to develop innovative energy solutions, enhance energy efficiency, and explore emerging technologies like carbon capture and storage. In sum, diplomacy is not just a means to secure energy supplies; it's a tool for building alliances, promoting shared values, and advancing the cause of energy security in a global context.

#### **- Strategic Gas Reserves:**

Maintaining strategic gas reserves is akin to creating a financial safety net for energy security.

Adequate gas storage capacity is essential for buffering against supply disruptions, ensuring a stable energy supply, and mitigating the impact of unforeseen events.

Europe must invest in the development and maintenance of gas storage facilities. These facilities can take various forms, including underground storage caverns, depleted gas reservoirs, and liquefied natural gas (LNG) storage tanks. Ensuring a diverse range of storage options enhances flexibility in responding to supply fluctuations. Having strategic gas reserves is not just about amassing gas; it's about having a well-thought-out strategy for their deployment. Policymakers should develop contingency plans that outline under what circumstances these reserves should be released and how they can be used to stabilize energy markets during crises. Beyond physical storage, technological advancements can play a role in optimizing gas reserves. Smart monitoring systems and data analytics can provide real-time insights into gas storage levels and consumption patterns, enabling more efficient use of these reserves. Strategic gas reserves also provide a buffer against price spikes.

When gas prices surge due to supply disruptions or increased demand, releasing reserves into the market can help stabilize prices and protect consumers from exorbitant energy bills. In conclusion, strategic gas reserves are an essential component of Europe's energy security strategy. They act as a safeguard against supply disruptions, contribute to price stability, and ensure a continuous and reliable energy supply for the continent.

#### **- Environmental Considerations:**

As Europe shifts towards alternative energy sources, environmental considerations take center stage. Sustainability and minimizing the environmental impact of energy production are paramount for a greener and more secure energy future. Low-impact energy production should be prioritized. This includes investing in technologies and practices that reduce the ecological footprint of energy generation. For instance, Europe can explore offshore wind farms, which have minimal land use impact and harness strong and consistent wind resources. Carbon-neutral energy sources, such as bioenergy and nuclear power, should be part of the energy mix. Bioenergy from sustainable sources and advanced nuclear technologies can provide consistent and reliable energy while significantly reducing greenhouse gas emissions.

Policymakers should also incentivize carbon capture and storage (CCS) technologies. CCS can capture CO<sub>2</sub> emissions from industrial processes and power plants, preventing them from entering the atmosphere and contributing to climate change.

Energy efficiency standards should extend to environmental considerations. Encouraging industries to adopt cleaner technologies and manufacturing processes reduces emissions and lessens the environmental burden of energy production.

Additionally, Europe can invest in research and development to advance eco-friendly energy solutions. This includes supporting projects that explore the potential of green hydrogen, which can be used as a clean fuel in various sectors, including transportation and industry.

In conclusion, environmental considerations should be at the forefront of Europe's energy strategy. Prioritizing sustainability, low-impact energy production, and emissions reduction will not only enhance energy security but also contribute to a cleaner and healthier planet. Europe's commitment to environmental responsibility is a testament to its leadership in the global energy transition.

#### **Conclusion**

In conclusion, the Ukraine-Russia war has fundamentally altered the European energy landscape, necessitating a reevaluation of energy security. Azerbaijan, with its abundant energy resources and the Southern Gas Corridor, presents a viable solution to diversify Europe's energy supply. While challenges remain, including political instability and competition from other suppliers, Azerbaijan is well-positioned to play a pivotal role in Europe's energy future. European policymakers must act decisively to harness this potential, reduce dependence on Russian energy, and ensure a more secure and sustainable energy future for the continent. By implementing the recommendations outlined above, Europe can navigate the evolving energy landscape with resilience and confidence.

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