



COUNTRY REPORT BULGARIA

Remina Aleksieva and Kalina Tcolova

Energy Without Russia

The Consequences of the Ukraine war and the
EU Sanctions on the Energy Sector in Europe

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Energy Without Russia: The Case of Bulgaria

The Consequences of the Ukraine War and the EU Sanctions
on the Energy Sector in Europe

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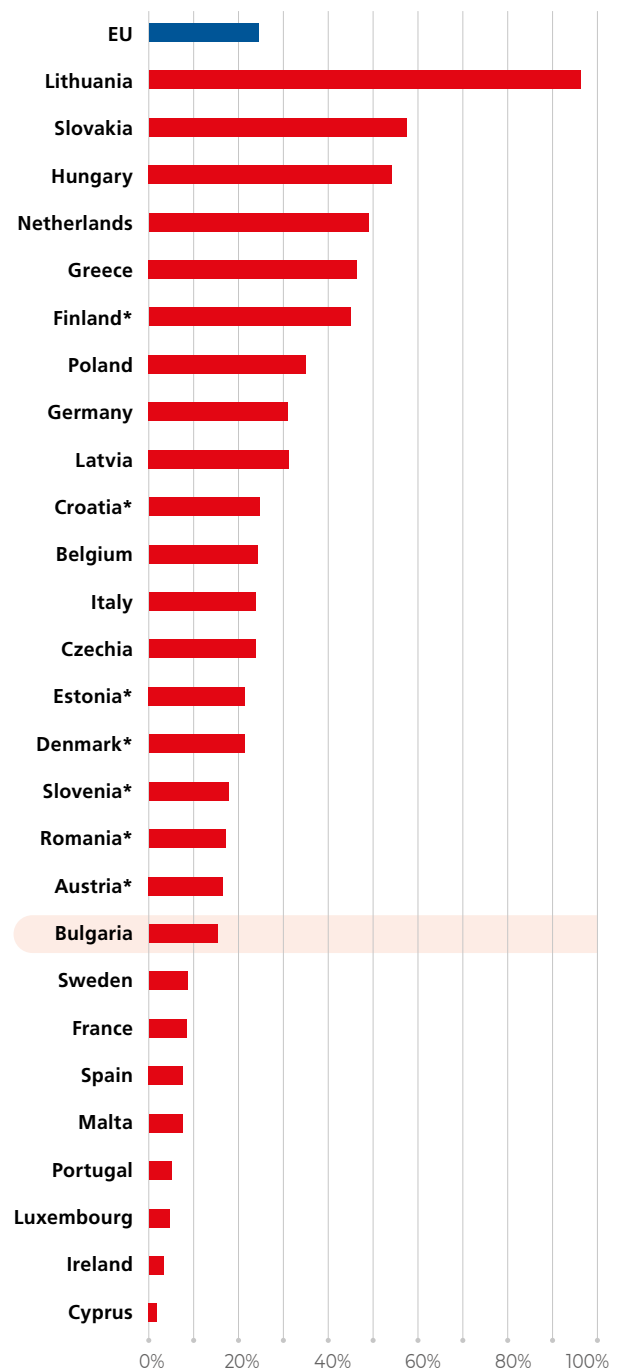
INTRODUCTION

The Russian invasion of Ukraine has exposed Europe’s energy and climate security vulnerabilities. With a high dependence on Russian oil and gas imports, Bulgaria met a staggering increase in gas, power and fuels prices, intensifying both the social and political instability.¹ Bulgaria has been especially exposed to the energy crisis as the country’s energy mix relies heavily on fossil fuels, particularly coal for electricity generation, and crude oil products for transportation.

A year after the invasion, Gazprom remains a crucial gas supplier in Southeast Europe. Bulgaria continues to import Russian pipeline gas from TurkStream and indirectly from Greek gas companies with long-term supply agreements with the Russian firm.

Resolving energy and climate security requires systematic and clear short-term and long-term measures that would put Bulgaria on a consistent pathway to strategic decoupling from Russia and carbon neutrality.

Figure 1
Imports from Russia in gross available energy, EU, 2020



¹ Center for the Study of Democracy, *Breaking Free: Natural Gas Security and Decarbonization in Southeast Europe*. Policy Brief No. 130, March 2023.

Source: Eurostat, Including estimates for non-reported data for countries with*

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BULGARIA'S ENERGY SECTOR: STATE OF THE ART

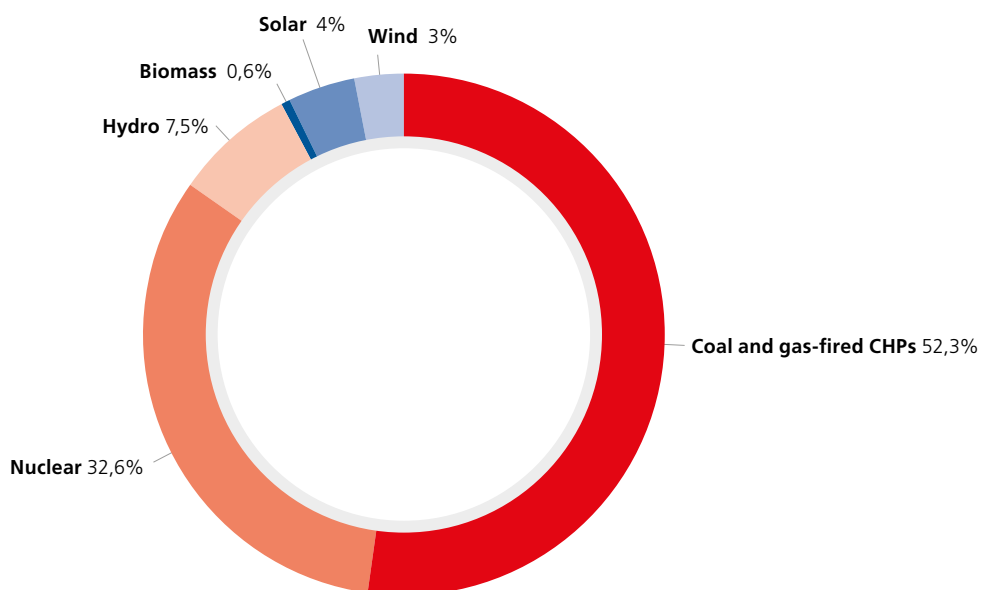
The Bulgarian energy sector has been long heavily dominated by fossil fuels, with lignite coal as the central local energy source and crude oil products serving as the main fuel for transportation. Despite the growing adoption of wind and solar energy technologies over the past ten years, primary solid biomass (firewood) continues to dominate the national renewable energy sector by covering the domestic heating needs of around half of Bulgaria's households. Although natural gas plays only a marginal role in the energy mix, 94% of the gas supply for 2021 came from Russian imports. After the state-owned, dominant wholesale market supplier Bulgargaz refused to accept a ruble-based payment scheme proposed by Gazprom, the Russian company unilaterally suspended gas deliveries on 27 April 2022. Even after the Gazprom supply cut, roughly half of the natural gas imports still come from the indirect purchases of Russian gas from Greece, Romania, and Turkey via TurkStream.²

Lignite coal remains the primary source of electricity generation (44%), while nuclear energy covers another 1/3 of the production. The share of RES such as hydro, solar, and wind has been steadily growing and now accounts for around one fifth of the power mix. The hydropower generation capacity in the country is functioning only at one third of its installed capacity due to regular malfunctioning, inefficient operation and a lack of market-driven utilisation.

Despite its having been Gazprom's decision to single-handedly cut the gas supply to Bulgaria, the Bulgarian caretaker government has sought to renew negotiations with Gazprom, taking over the responsibility for the termination of the contract. In addition, successive governments lobbied the EU institutions to grant Bulgaria an exemption to the sanctions against Russian oil imports, thus upholding the dominant position of Lukoil in the country's refining and wholesale market. The Bulgarian government has even threatened to veto potential sanctions on Russia's state-owned nuclear sector.

² Center for the Study of Democracy, *The Future of Natural Gas in South-east Europe*. Sofia: 2023.

Figure 2
Bulgarian Gross Electricity Generation for 2022 by Source



Source: Bulgarian Electricity System Operator

Since the Gazprom supply cut, Bulgaria has been purchasing natural gas monthly from companies in the SEE region, who have active long-term contracts with Gazprom, thus indirectly continuing to buy Russian gas usually at higher prices than the one in its long-term contract (which expired on 31 December 2022). Further delays on the construction of the key interconnector pipeline with Greece meant that for most of 2021 and 2022, Bulgaria was paying a higher price for the Azeri gas for 2/3 of the contracted volumes although the Azeri supply, based on a 25-year 100% oil-indexed agreement, is currently much cheaper than the average European gas price on the spot market. The commissioning of the gas interconnector Greece-Bulgaria (IGB) on October 1, 2022, allowed Bulgaria to receive the full Azeri gas volumes at the long-term contractual price. Shortly, IGB will be also shipping liquefied natural gas (LNG) arriving at the Alexandroupolis floating storage and regasification unit (FSRU), which is due to come online in January 2024.

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THE RESPONSE TO THE ENERGY CRISIS

Soaring prices for energy commodities, including natural gas and coal, led to a sharp surge in power generation costs and contributed to an acceleration of inflation. Bulgaria attempted to offset the high energy prices by introducing a stimulus package, covering 80% of the price of electricity paid by businesses that reach over €100 per megawatt hour. This measure led to excessive profit for the largest energy consumers in the country, instead of supporting small to medium-sized enterprises in improving their energy efficiency and decarbonising their mix. The surge in fuel prices prompted the Bulgarian government to introduce a ‘fuel subsidy’, offering a 12.5 eurocent reduction for every litre of gasoline and diesel. The government allocated €3.9 billion in total to households and businesses, or 5.9% of GDP in 2022, contributing to the country’s ballooning budget deficit.³

On 5 February 2023, the EU’s sanctions package, which includes a ban on imports of Russian crude oil and refined products, came into full effect. The embargo does not apply to Bulgaria as the government was able to secure a derogation from the sanctions for Lukoil’s Neftochim Burgas Refinery and petrochemicals complex, allowing it to continue processing Russian oil and selling refined products to Bulgarian and Ukrainian consumers.⁴

Bulgaria has claimed that the refinery’s operation and the country’s supply of refined products would not be guaranteed without the derogation. Bulgaria defended the derogation of the EU’s ban on imports of Russian crude oil and refined products by claiming that it would prevent market disruption, increase tax revenues, and lower fuel prices. The Bulgarian government, which has a ‘golden’ share in Lukoil’s Neftochim Refinery, giving policymakers the ability to influence the company’s strategic policy, has been unsuccessful in negotiating better prices with the refinery or making it diversify the supply of crude oil to non-Russian sources.

In terms of natural gas, only a small fraction of Bulgarian households, comprising a mere 2%, are connected to the gas grid. These consumers were suddenly faced with dra-

matic increases in gas prices in 2022 and limited financial support from the government. The impact of these skyrocketing prices has been concentrated among middle and upper middle class households, which constitute the majority of gas users. Households connected to central district heating have also been affected, given that gas is a key input for heat generation. Hence, district heating prices increased by approximately 40% during the crisis. Despite these challenges, district heating prices remain heavily subsidised and competitive compared to other alternatives. The industry sector, the largest consumer of gas in the country, has been significantly affected by the rise in gas prices. However, this has not led to massive bankruptcies, as the subsidies for electricity prices and fuel switching to the much cheaper propane have preserved the country’s industrial competitiveness.

The Bulgarian gas transmission system operator bought a 25% stake in the Alexandroupolis terminal guaranteeing that Bulgaria would have strategic access to the facility. The fact that the Alexandroupolis FSRU will be connected to TAP and the IGB means that the terminal could become a hub for LNG supplies to all of the SEE regions. If Bulgaria can secure a 10-year LNG supply contract from 1 January 2023, together with the Azeri gas shipped via IGB, the country would have almost completely diversified away from Russian gas and could play a key role in improving the natural gas security position of all countries in the region via the Bulgaria-Serbia interconnector currently under construction. In addition, Greece, Bulgaria, and Romania have accelerated the joint work on reversing the physical flow on the Transbalkan Pipeline in the South-North direction, hence supplying alternative natural gas volumes to Moldova and, ultimately, to Ukraine.

LONG-TERM SUPPLY DIVERSIFICATION

Bulgaria will find it difficult to eliminate its dependence on Russian gas without taking additional steps to secure at least another 0.7 bcm per year of alternative supply through 2030.⁵ Securing the natural gas supply would be challenging in the event of a complete Russian gas cut-off in the SEE

³ Sgaravatti, G., S. Tagliapietra, C. Trasi and G. Zachmann, *National policies to shield consumers from rising energy prices*, Bruegel Datasets, 2023.

⁴ Center for the Study of Democracy, *Decoupling from Russian Oil*. Sofia: 2023.

⁵ Center for the Study of Democracy, *The Future of Natural Gas in South-east Europe*. Sofia: 2023, p. 27.

region. Azeri gas can cover only about one-third of national demand, which will be sufficient for the needs of households and district heating companies. Industrial consumers, however, are at risk. Bulgargaz purchases the necessary volumes month by month without a long-term contract and at prices above the Title Transfer Facility benchmark. If there is an abrupt supply shortage, other gas buyers from Greece and Turkey would most probably compete for all available capacity at the existing LNG terminals, as currently there is no solidarity mechanism among neighbouring SEE countries to distribute available gas volumes equally.

Even in the most ambitious decarbonisation and gas phase-out scenario that includes comprehensive gas demand reduction measures, the share of Russian gas will not fall below 33% even by 2030. Thus, there is a need for additional steps towards diversification to ensure Bulgaria's security of supply.⁶ Bulgaria must collaborate with Greece and Turkey to agree on a common plan for using LNG regasification facilities in the event of a security or supply crisis. In late 2022, Bulgargaz and the Turkish state-owned monopoly, BOTAS, signed a deal that would enable the Bulgarian company to import up to 1.5 bcm/yr based on guaranteed access to the Turkish gas transmission system for an equivalent capacity volume. While this agreement is a step towards improving the security of supply, it falls short of the long-term objective of signing an interconnection agreement between Bulgaria and Turkey that would allow foreign gas traders access to the Turkish gas market, making Turkey one of the most important natural gas hubs in Europe

A sustainable solution to the gas security conundrum would be the conclusion of a long-term LNG supply agreement with a major supplier such as the US, Qatar, Algeria, etc. Despite the abundance of LNG deliveries to Europe, so far Bulgaria has secured only individual cargoes, usually at above-market prices using trading intermediaries. The lack of access to an LNG regasification facility is one of the biggest obstacles to striking a long-term LNG supply deal for Bulgargaz. This may change with the commissioning of the Alexandroupolis FSRU on the Greek Aegean coast, where Bulgargaz has booked 1 billion cubic meters of firm long-term capacity over the next ten years. Bulgaria can also strengthen its security of supply position by unlocking the country's large energy efficiency potential linked to fuel switching from gas to electricity, demand side measures in industry, and the uptake of cutting-edge low-carbon technologies with hydrogen and synthetic fuels.⁷

⁶ Ibid.

⁷ Center for the Study of Democracy, *The Future of Natural Gas in South-east Europe*. Sofia: 2023, p. 39.

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LONG-TERM ENERGY AND CLIMATE POLICY

Implementing ambitious decarbonisation policies that reduce natural gas demand can greatly diminish the country's vulnerability to Russia and contribute to stronger energy and climate security. Instead of focusing on developing a strategy to gradually phase out fossil fuels and accelerate investments in renewables, in 2021, Bulgaria increased its electricity production from coal by 30.8% without an agreed outlook to reduce its role in the energy mix.

The Bulgarian Parliament passed a decision requiring the government to renegotiate the National Recovery and Resilience Plan and remove the 40% CO₂ emissions reduction target by 2026 while keeping coal-fired power plants operating until at least 2038. However, the Parliament passed a decision requiring the Bulgarian government to renegotiate this commitment leading to a delay in the Plan's implementation, meaning that Bulgaria could lose up to EUR 7.5 billion in structural funds by 2027.

Bulgaria's energy strategy for the next 30 years prioritises large-scale infrastructure projects.

The vision of maintaining subsidies for the coal sector in Bulgaria after 2025 is economically unsound and runs against EU rules on state aid for polluting plants. The concerns about electricity supply security justifying the preservation of coal are overstated, as Bulgaria is currently a major exporter of electricity in Europe. Moreover, modelling assessments conducted by the Bulgarian Electricity System Operator in October 2022, assessing the power supply and demand trajectories of the whole SEE region, reveal that the coal phase-out in combination with massive investments in renewables will not jeopardise the security of supply and is feasible with the necessary investment in the transmission grid capacity.⁸

The current energy and climate strategy would make Bulgaria reliant on importing green energy from neighbouring countries. Additionally, the potential impact of energy efficiency measures in reducing electricity consumption is not being fully considered, which could eliminate the need for large base load capacities after 2030, beyond the capacity of the Kozloduy Nuclear Power Plant.

⁸ Chavdarov, N., and Sulakov, S., *Bulgarian Resource Adequacy Assessment*, Sofia: ESO, 2022.

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WHAT'S NEXT?

More than a year after the conflict in Ukraine began, Bulgaria has been hesitant to increase its 2030 energy and climate targets as local oligarchic networks have aimed to preserve the country's dependence on the use of coal for power generation.⁹ The delayed debate about the impact of the European Green Deal on a national, regional, and local level has led to limited progress on building a consensus around Bulgaria's common decarbonisation strategies. There is an urgent need for a long-term national data-based energy transition policy with consistent targets, concrete milestones, and policy actions, as Bulgaria currently lacks a coherent and up-to-date energy strategy.¹⁰

To achieve climate neutrality by 2050, Bulgaria must accelerate the fossil fuel phase-out before 2030 and transform its economy on the back of accelerated electrification and industrial decarbonisation. This process goes through deep energy efficiency improvements, large-scale renewable energy investments including those in cutting-edge technologies such as offshore wind energy and power storage, as well as through the uptake of alternative fuels such as hydrogen and synthetic fuels in industrial processes where the use of electricity is not feasible.

⁹ Center for the Study of Democracy, *Tackling the Energy and Climate Security Conundrum in Southeast Europe*, Policy Brief No. 110, May 2022.

¹⁰ Center for the Study of Democracy, *At a Decarbonisation Crossroads*. Policy Brief No. 127, March 2023.

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