



ENERGY SECURITY RISKS AND THE CASE FOR NATURAL GAS DIVERSIFICATION

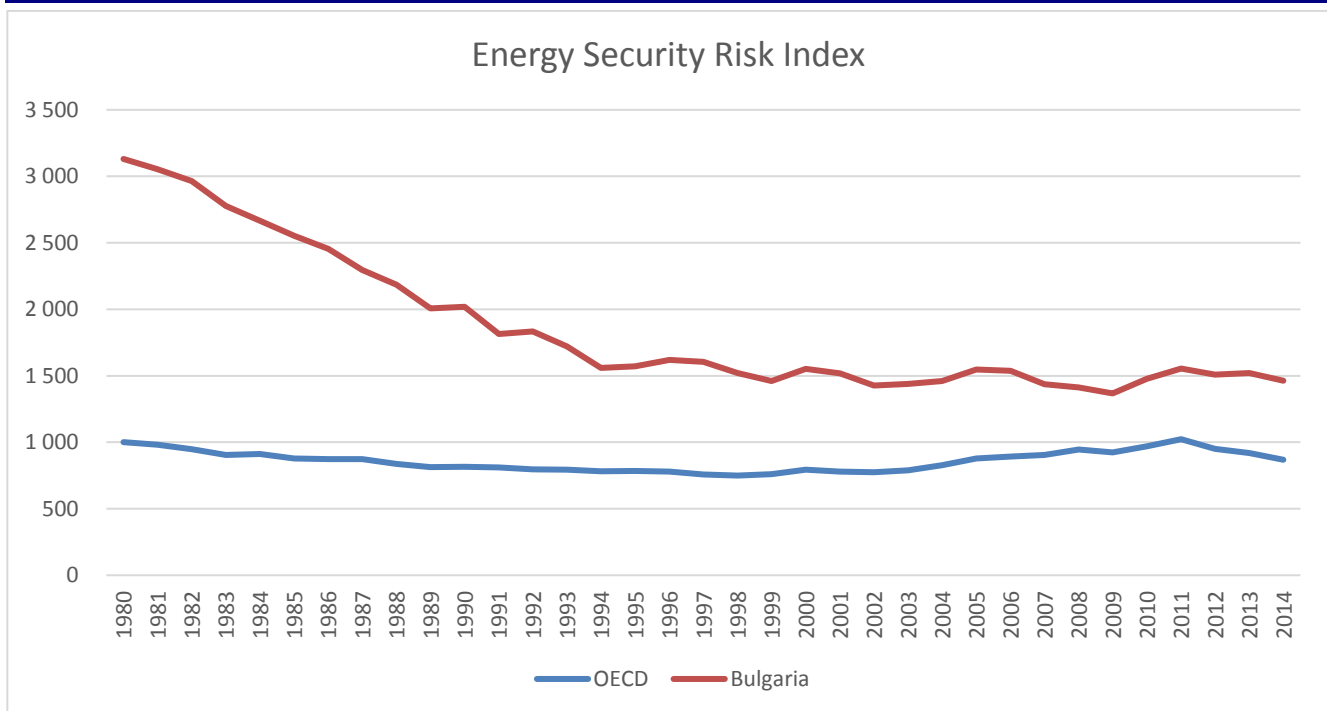
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Energy Security Position

The Bulgarian energy sector remains of key importance for the development of the country's economy. On the domestic side, Bulgaria's energy sector faces severe governance deficiencies at multiple levels that lead to inefficiency and inconsistency of decision-making. Additionally, Bulgaria's legal and regulatory framework is characterized by lack of adequate supervision and guaranteed independence. Political meddling and conflicts of interest at the highest level of government compromise the strategic approach towards the sector, and often lead to poor management of the state-owned companies. Despite the recent overhaul of the energy sector that had closed the fiscal gap in most state-owned energy enterprises, persistent governance deficits have prevented the successful improvement of the country's energy security position. Bulgaria has consistently underperformed in the international energy security risk index (created by the Institute for 21st Century Energy) although the most recent data shows that Bulgaria jumped from 73rd to 58th place in the 2016 ranking narrowing the gap with the average OECD results.

KEY POINTS

- Bulgarian ranking has improved significantly, jumping from 73rd to 58th place, narrowing the gap with the average OECD results.
- Since Bulgaria receives all of its natural gas from one source and via one pipeline, it is imperative that the government's decisions for the initiation of future energy projects are based on the projects' potential to diversify supply sources and ensure an uninterrupted energy supply.
- The efforts to diversify the gas supply by building the Interconnector Greece - Bulgaria (IGB) have stalled in spite of external financing, existing contractual obligations with the Shah Deniz consortium and due to lack of administrative capacity and state capture from domestic and foreign interests.
- The European Commission's efforts to integrate the SEE region into the EU internal market and diversify its gas supply away from a single supplier have started to pay off. The liberalization of the cross-border capacities along the Transbalkan pipeline, previously fully reserved by Gazprom, is now open for competitive bidding.
- The liberalization of regional natural gas trading and the completion of the interconnector pipelines with Greece and Romania would advance Bulgaria's bargaining position vis-à-vis Gazprom by reducing the country's gas import costs, and improve the country's security of supply and the affordability of residential gasification initiatives.



Source: *International Index of Energy Security Risk, Edition 2016.*

However, Bulgaria still faces critical issues related to:

- 1) **Affordability:** over a third of the households report were unable to afford keeping their homes adequately warm, and roughly 60 % of the Bulgarian households have used wood for cooking and heating – a criterion for defining a household as energy poor. The country is also a leader in the EU in terms of the share of households that have defaulted on their utility bills, despite the fact that Bulgaria's pricing policy is devised around keeping electricity prices artificially low, with modest, yet frequent, price increases, to compensate for other economic weaknesses – an unsustainable approach in the long-term.
- 2) **Availability:** the country remains almost fully dependent on the imports of natural gas, crude oil and nuclear reactor fuel from one source, namely Russia. The moratorium on fracking approved by the Parliament in 2012, and the neglect of on-shore oil and gas exploration and production are among the main weaknesses negatively influencing the availability of resources in Bulgaria over the last five years. If they are managed and governed properly, the production

capacity of nuclear and hydro-electricity, the availability of coal, as well as the potential for unconventional energy sources are among the strengths of the country. Launched in April of 2016, the first hydrocarbon exploration drilling in the Khan Asparuh block by a consortium consisting of three international oil majors, is one of the few positive developments in this direction. This initiative is a contribution to the country's efforts to reduce its dependence on imports and develop its own domestic oil and gas reserves. The government also granted concession rights to Royal Dutch Shell for the 2D and 3D seismic studies of the offshore Black Sea block, "Silistar" proving that despite the low oil prices, IOCs remain interested in the country's hydrocarbon potential.

- 3) **Reliability:** Since Bulgaria receives all of its natural gas from one source and via one pipeline, it is imperative that the government's decisions for the completion of future energy projects are based on the projects' potential to diversify supply sources and ensure an uninterrupted energy supply. The set of criteria

should be led by best value for money, with the value defined as effect on the resilience of the energy system to external and internal shock and the competitiveness of both consumers and the producers. In this respect, the Bulgarian government needs to reinvigorate its efforts to complete the construction of the interconnector Greece-Bulgaria if Bulgaria is to achieve at least limited energy diversification by 2020.

The project is strategically important as it would not only diminish Bulgaria's dependence on Russia, but would also improve the government's bargaining position vis-à-vis Gazprom ahead of the renegotiation of the country's long-term contract in 2021. The reliability of the natural gas supply is closely linked to the liberalization of the regional cross-border trading and the opening of the virtual reverse flow capabilities of existing pipeline infrastructure. The Bulgarian gas transmission's operator (Bulgartransgaz) has successfully concluded agreements with its Greek and Romanian counterparts to allow third-party capacity booking along the Transbalkan transit pipeline, previously used just by Gazprom. The cross-border liberalization would provide incentives to private gas trading companies to enter the SEE market and sell available spot LNG gas from the regasification terminals on the Aegean coast or future supplies from the Caspian basin, the Middle East and the Eastern Mediterranean.

- 4) **Environmental Sustainability:** Considering the country's strained finances and extended state aid risks, measures to reduce the demand for energy are most logical for Bulgaria in both short- and long-term perspective due to the fact that the price to be paid will be distributed among the most dispersed number of actors. The country's transition to low-carbon growth is not yet a reality and requires complex interdisciplinary policies following two major trends - reducing the energy dependency of the economy, and

improving the energy efficiency of the residential sector. Compared to both the EU28 average and its neighboring countries, Bulgaria is still lagging far behind in terms of energy intensity, despite the positive decreasing trend over the last fifteen years. The very low level of energy efficiency in the residential sector can be attributed to the outdated residential building infrastructure and the use of high energy consumption appliances. When it comes to the policy options for improved environmental sustainability, the renewable energy support mechanism leading to a rapid increase in renewable energy capacity have negatively influenced both the public opinion and the government's decision in Bulgaria about the value of energy transition policies. Nonetheless, a sustainable energy transition would solve multiple energy policy problems at the same time including the reduction of Bulgaria's dependence on energy imports, the financial burden on households struggling to cover their energy expenditures and the flexibility of the energy system.

The Case for Natural Gas Diversification

The affordable gas supply is the most sustainable energy alternative for Bulgaria, especially if it replaces coal and wood as the main heating source in the residential sector. Bulgaria depends on imports for approximately 97% of its natural gas needs. Although the source and route diversification of the gas supply have been identified as one of the major energy security risks for Bulgaria, only modest progress has been achieved since the Russian-Ukraine gas supply crisis in 2009 although the country was among one of the hardest hit. Six years later the government has done little to improve its energy security. Efforts to diversify the gas supply by building the regional

interconnectors with Greece, Turkey and Romania have stalled in spite of external financing and due to lack of administrative capacity and state capture from domestic and foreign interests. Having achieved little progress in terms of diversification, Bulgaria is currently paying some of the highest natural gas prices in the EU.

The efforts to diversify the gas supply by building the Interconnector Greece - Bulgaria (IGB) have stalled in spite of external financing, existing contractual obligations with the Shah Deniz consortium and due to lack of administrative capacity and state capture from domestic and foreign interests. Instead the Bulgarian government has refocused its energy security agenda to the creation of a natural gas distribution hub near Varna, which is based on an unrealistic assessment of the existing and future gas demand and on the possible sources of new supply. The planned natural gas hub would not be possible without the construction of at least one alternative energy route via Greece to bring Azeri gas to Bulgaria and the broader SEE region.

The consortium partners in the IGB struck a conditional Final Investment Decision (FID) for the realisation of the project. However, there has been very little tangible progress while the funding and the commercial viability of the pipeline remain a challenge. The government conducted a market test to see whether the pipeline capacity would be utilised in the future. The results showed insufficient investment interest as only the Bulgarian wholesale supplier, Bulgargaz, and the Greek counterpart, DEPA, reserved capacity in the IGB – 1 bcm and 0.2 bcm/yr, respectively. The unsatisfactory outcome pushed the IGB shareholders to launch a second test. During the non-binding phase, which ended this April, 6 companies have expressed interest for a total aggregate capacity of 4.3 bcma and 1 bcma for the reverse mode from Bulgaria to Greece.

Companies will need to confirm their interest in the on-going binding phase of the market test. The project will need enough capacity bookings to allow it to be commercially viable at a non-prohibitively high transmission tariff. If the contracted Shah Deniz 2 gas is the only source for IGB, the project will face further commercial and financial obstacles that could be overcome either by a change of the shareholder structure or by a change of the business model for the pipeline. The construction of the IGB pipeline is a key prerequisite for the development of a competitive and liquid market in SEE. It would not only provide alternative gas supply, but could also restart the stalled process of domestic household gasification.

The European Commission's efforts to integrate the SEE region into the EU internal market and diversify its gas supply away from a single supplier along the Central European model have started to pay off. The liberalization of the cross-border capacities along the Transbalkan pipeline, previously fully reserved by Gazprom, is now open for competitive bidding. Yet risks lie ahead and it would be naive to think that Gazprom would not try to prevent liberalisation. By making Russian gas more competitive, Gazprom could weaken the general argument among energy policy-makers that the alternative gas could be cheaper and that diversification investment pays off. Many energy policy-makers in the region share this opinion. However, Gazprom's decision to cut prices in the face of potential competition shows nervousness about the prospect of new gas arriving on the regional market. Hence, instead of delaying further liberalization efforts, now is the time to actually step up the regional cooperation between regulators and national gas companies. This would further improve the region's bargaining position vis-à-vis Russia ahead of talks for a new long-term contracts in early 2020s. In this context, the recent example

of Lithuania cannot be stressed further. By completing its floating LNG terminal near Klaipeda, the Lithuanian government secured a nearly 25% cut in the price Gazprom charged its national gas supplier. With global gas supply competition rising, there has never been a better moment for SEE to try to tap into the world market and to connect the archipelago of energy islands to the mainland.

Policy Implications

Improving the energy security in Bulgaria, including the liberalization and diversification of the national and regional gas supply requires the following actions:

- The government should introduce decision-making procedures for prioritization and selection of large investment projects based on clear and transparent criteria and fact-based analyses, synchronized with the EU and CEE regional priorities. Otherwise, the large gas infrastructure projects would be vulnerable to serious corruption risks. Hence, the government should not focus its natural gas security strategy on the creation of a natural gas distribution hub near Varna, without presenting any feasibility study or assessment of the existing and future gas demand, and on the possible sources of new supply.
 - Lowering administrative, regulatory and political burdens at national level to speed up those energy infrastructure projects, which may have regional and European effect, such as the gas interconnectors between Bulgaria, Romania and Greece as part of the Southern Gas Corridor.
 - EU supports the Interconnector Greece-Bulgaria (IGB) through the CESEC group and the Project of Common Interest (PCI) list. However, the interconnector is being developed under a merchant-based model and is currently not eligible for any EU funds. In order to be able to apply for EU funding (through the Connecting
- Europe Facility) the project could consider moving to a regulated model. This would imply a change of shareholder structure and the need to involve DESFA and Bulgartransgaz as the national TSOs.
- Clear commitment on behalf of the Bulgarian government to provide financial guarantee for its equity share in the IGB project despite the underutilization of the pipeline's capacity in its first three years until the end of the long-term contract with Gazprom in 2022.
 - There needs to be a renewed political drive to jumpstart the project for the expansion of the Chiren Underground Gas Storage Facility. The successful completion of the expansion project is directly related to the independence and transparency of the management of Bulgartransgaz. These could be ensured via the following measures:
 - Strict and timely implementation of Bulgartransgaz' investment program until 2020, which includes Chiren's expansion.
 - The management of the tenders for a feasibility study consultant and an EPC contractor should ensure fair competition and set strict guidelines for the technological experience of bidders.
 - Prevent cost overruns driven by corrupt management practices and independently verify the project's value estimate.
 - The expansion of the gas storage, on the other hand, is crucial for the Bulgarian energy security as it provides the country with peak demand management mechanism preventing gas shortages during supply disruptions.