

ENERGY SECURITY IN SOUTHEAST EUROPE: THE GREECE-BULGARIA INTERCONNECTOR

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Southeast Europe remains an energy island on the continent. Most countries' policies are far away from EU Energy Union priorities.¹ Their fragmented small markets rely most times on Russia as an outside source of energy.² Hence, despite being the most energy poor countries in Europe, the Balkans have paid among the highest energy bills and born some of the highest energy costs on society and the environment. EU and NATO members Bulgaria and Greece in the south and Croatia in the north of the Balkans, hold the key to Southeast Europe's energy security strategy. Unlike Romania, which has its own energy resources, Bulgaria and Greece share the energy security situation of the rest of the region.³ Bulgaria has emerged as the most important country for solving the long-term energy security conundrum of the region. Yet, to enable the transformation of the regional energy sector, Bulgaria would need to complete the liberalization, diversification and integration of its electricity and gas markets.

Energy Security Priorities

Bulgaria has improved its energy security position in the past decades. The *International Energy Security*

¹ SELDI.net (2016). *Energy Governance and State Capture Risks in Southeast Europe: Regional Assessment Report*. Sofia: Center for the Study of Democracy.

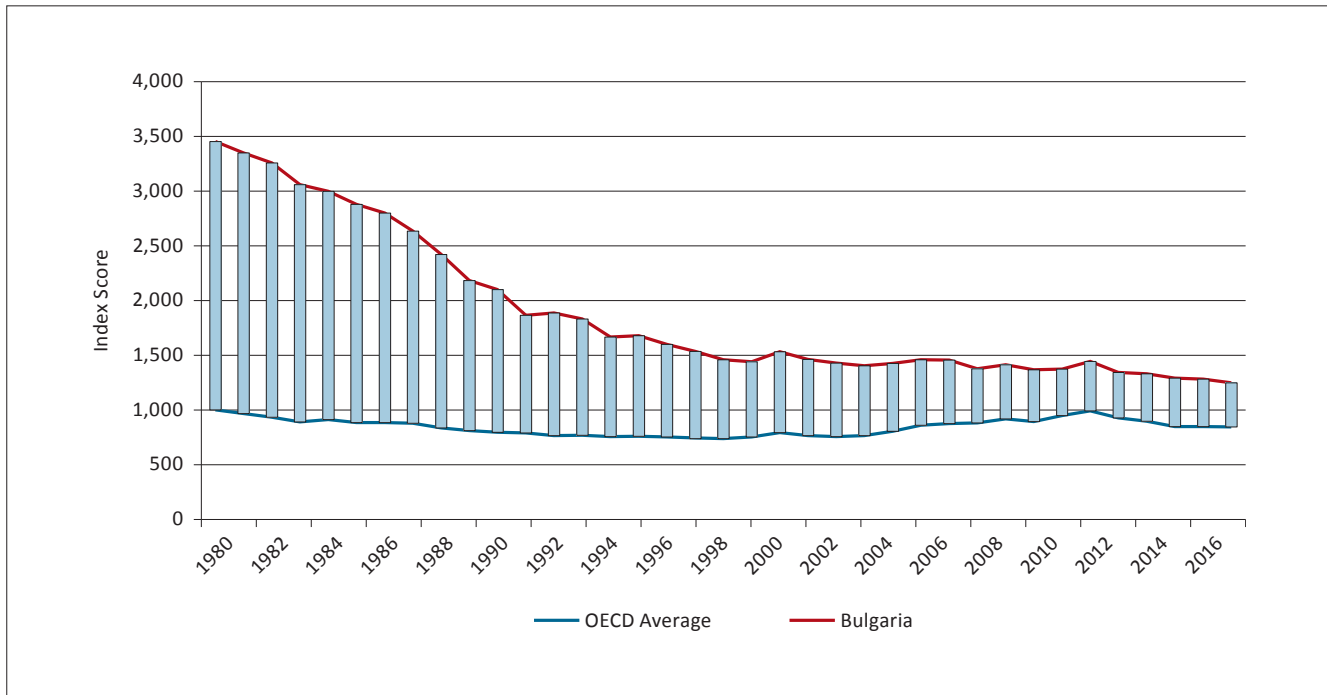
² Shentov, O. et al. (2019). *Russian Economic Grip on Central and Eastern Europe*. New York: Routledge.

³ CSD (2015). *CSD Policy Brief No. 58: Transparent Governance for Greater Energy Security in CEE*. Sofia: Center for the Study of Democracy.

KEY POINTS

- Southeast Europe remains reliant on expensive energy imports from Russia and ill-prepared to withstand another major supply crisis.
- Bulgaria has dragged its feet on completing long overdue interconnectors and storage facilities that would diversify gas supply, integrate regional markets and contribute to the liberalization of gas trading.
- Without stepping up its diversification efforts to complete the IGB pipeline, Bulgargaz' bargaining position vis-à-vis Gazprom would be undermined at a moment when the company has the opportunity to significantly improve the pricing formula and volume terms of its new long term contract.
- The current level of capacity bookings and the rate of return demanded by the shareholders in the IGB pipeline make the project economically vulnerable and potentially less competitive than Russian gas.
- To improve IGB's sustainability and unlock regional gas trading, a key ingredient would be the full enabling of the reverse flow cross-border capacities along the Transbalkan pipeline, previously reserved for Gazprom.
- The government should tap into the growing global LNG market to attract additional interest from gas shipping companies wishing to sell in the SEE region, including via the LNG regasification terminal at Revithousa in Greece and the planned new floating facility near Alexandroupolis only a short distance from IGB's entry point.

Figure 1. 2018 Energy Security Risk Index



Source: CSD, based on Global Energy Institute, *International Index of Energy Security Risk*, Edition 2018.

Risk Index 2018 showed the country ranked 51st out of the 75 largest energy consumers, up from 73rd in 2015 and further narrowing the gap with the OECD average (Fig. 1). Nonetheless, four key vulnerabilities remain.⁴

- **Good governance** has been the exception rather than the rule in the sector, with strategic documents agreed with Brussels being disregarded for political expediency, and lack of public sector transparency and coherence.
- **Energy poverty** remains widespread as income levels in Bulgaria remain much lower than the EU average. Convergence has been slow, and energy poverty driven protests have been used to spike political pressure and stop investment projects.⁵
- **Energy efficiency** has been improving, supported by EU funds in the industry and by government programs in the household sector, but remains lower than the EU average.

- **Diversification and liberalization** of energy markets have been developing painfully slowly, with gas being the most monopolized market, blocking its role as transition energy and penalizing the Bulgarian industrial competitiveness.

Gas Diversification: The Greek-Bulgaria Interconnector and Beyond

Almost a decade after the natural gas crisis in January 2009, when Russia cut supplies to the country in the height of winter, Bulgaria has done the bare minimum to withstand a major supply disruption. The country should embrace a much more ambitious agenda in securing alternative supply sources and routes to reduce its close to 100 % dependence on Russia in oil and gas. Further lack of action would

⁴ Shentov, O. et al. (2014). *Energy Sector Governance and Energy (In)Security in Bulgaria*. Sofia: Center for the Study of Democracy.

⁵ CSD (2018). *CSD Policy Brief No. 79: Decentralization and Democratization of the Bulgarian Electricity Sector: Bringing the Country Closer to the EU Climate and Energy Core*. Sofia: Center for the Study of Democracy.

result in the recurrence of gas cuts as in the winters of 2009 and 2015, a monopolized domestic market, and import prices among the highest in Central and Eastern Europe. It would perpetuate Russia's dominant position in the energy market in SEE, which the Kremlin has used to corrupt powerful political and economic figures and shape political decisions across the region.⁶

The inconsistency of the Bulgarian gas diversification energy security policy has been particularly visible in the development of the **Greece-Bulgaria Interconnector** (IGB) pipeline. IGB will bring 1 billion cubic meters of alternative gas per year from the Shah Deniz gas field in Azerbaijan starting from late 2020. The project is strategically important as it decreases Bulgaria's energy dependence on Russia and improves the government's bargaining position vis-à-vis Gazprom ahead of the renegotiation of the country's long-term contract, which has already begun under pressure from the European Commission.

Efforts to diversify the gas supply by building the IGB had stalled for most of the 2009 – 2016 period in spite of secured external financing and existing contractual obligations with the Shah Deniz consortium. In the past two and a half years, the project has managed to mature and many of the challenges before its implementation have been overcome. The IGB consortium company has: concluded long-term binding shipping agreements for a bit more than half of the pipeline capacity (1.57 bcm/yr); secured a state guarantee for half of the building costs (EUR 110 million) and a total of EUR 84 million in EU financing; and received an exemption from the Third Energy Package allowing the commercial model for the project implementation. ICGB AD, the managing company, has started public procurement procedures for choosing EPC contractors.

However, at the current level of capacity bookings and the rate of return demanded by the shareholders, the **transmission fee remains prohibitively high to lure in additional shippers**. If the contracted Shah

Table 1. Russian natural gas prices at the border of selected EU countries in Q2, 2018

| EUR/MWh | DG Energy Q2 – Average Russian gas prices |
|----------------|---|
| Estonia | 21.86 |
| Slovenia | 21.32 |
| Czech Republic | 20.38 |
| Slovakia | 20.16 |
| Bulgaria | 19.92 |
| Hungary | 19.86 |
| Italy | 19.69 |
| Romania | 19.65 |
| Greece | 18.97 |
| Lithuania | 18.60 |
| Latvia | 18.06 |

Source: CSD, based on DG Energy, European Commission.

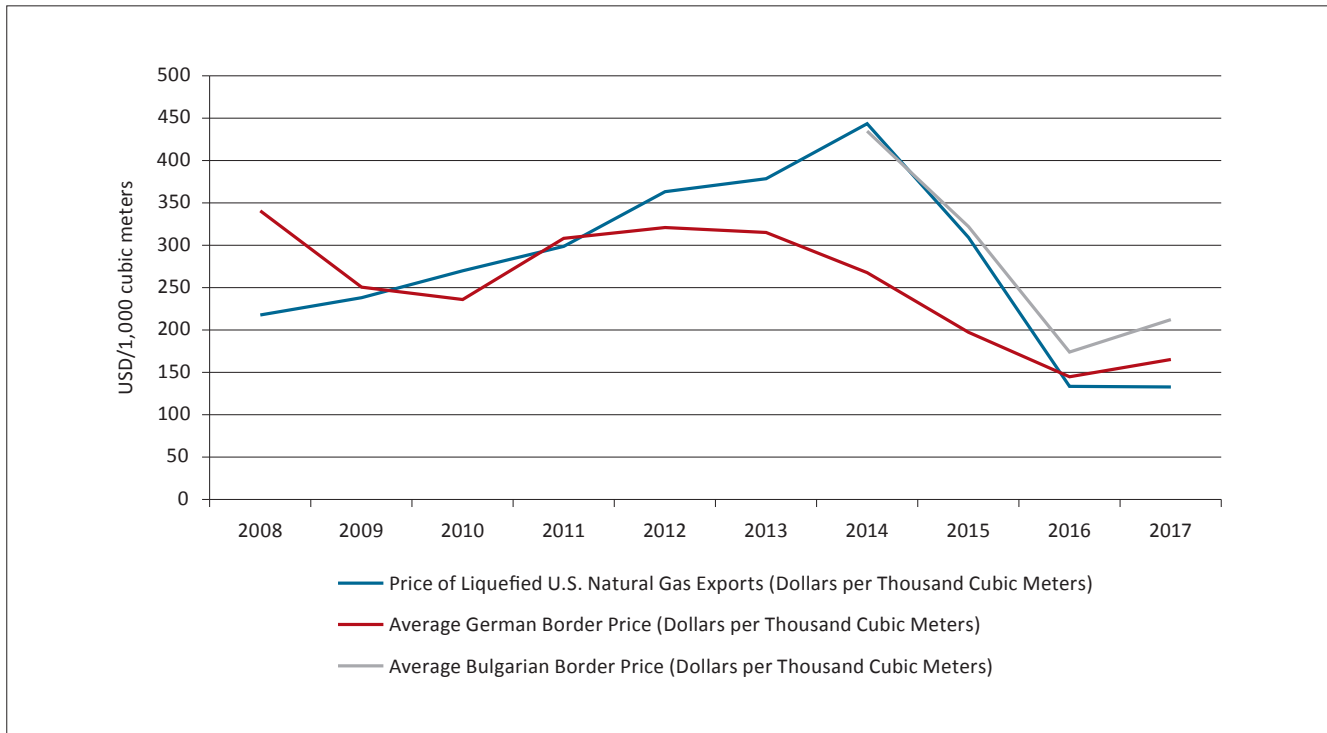
Deniz 2 gas is the only source for IGB, the project will face further commercial and financial obstacles that could make the alternative gas entering the region more expensive than the Russian supply. This is even more the case considering the fall in Russian natural gas import prices in the 2016 – 2017 period. Since the Shah Deniz supply contract has a similar oil-indexed pricing formula to the Gazprom agreement, a renegotiation of the latter would make the Azeri gas non-competitive in the region.

The pipeline would have been much more attractive to potential gas shippers had the project been developed under a regulated model. It would have made IGB eligible for direct EU funding under the Connecting Europe Facility (CEF), significantly lowering the transmission fee.

IGB's construction is a key prerequisite for the development of a competitive and liquid market in SEE, but it is not the only one. Without further gas market integration in the region based on the liberalization of transmission and transit pipelines along the South-North route, there will be little incentive for new gas suppliers to join. A key ingredient for the re-

⁶ Shentov, O. et al. (2018). *Russian Economic Footprint in the Western Balkans: Corruption and State Capture Risks*. Sofia: Center for the Study of Democracy.

Figure 2. U.S. LNG can act as a pricing ceiling for Russian pipeline gas in Europe



Source: CSD, based on U.S. Energy Information Administration, BP Statistical Review of World Energy, COMEXT.

gional gas diversification strategy would be the full enabling of the reverse flow cross-border capacities along the Transbalkan pipeline, currently reserved for Gazprom.

The commitments made by regional gas transmission system operators (TSOs) during the October 2018 meeting of the Central and South Eastern Europe Energy Connectivity (CESEC) Group meeting to gradually enable reverse flow on transit pipelines towards Romania and Ukraine is a step in the right direction. However, the **full regional market liberalization** would require much more funding, and, more importantly, political will to implement agreements. This would improve the region’s bargaining position vis-à-vis Russia ahead of talks for a new long-term contract in the early 2020s. The experience of the Baltic countries and Poland, which have completed a regional gas market facilitated by interconnectors and two new LNG regasification plants, can serve as a blueprint. The dramatic fall in wholesale gas prices and the diminishing role Gazprom plays in domestic market in northeast Europe have not only strengthened the region’s energy security, but have also di-

minished the threat to their economic and political sovereignty.

The Hub

Instead of focusing on regional market integration and liberalization, the Bulgarian government has persisted with its concept for a **natural gas hub near Varna**, which envisions a trading point for Russian (via a “South Stream lite” pipeline through the Black Sea), Azeri and LNG gas (via the Trans-Adriatic Pipeline and the Greece-Bulgaria interconnector), as well as potential domestic production from Black Sea offshore reserves. To be successful, any gas trading hub needs to fulfill three key criteria: for **diversity** (at least three realistic sources of gas), **liquidity** (enough gas volumes to allow for active trading) and **depth** (full market liberalization based on non-discriminatory, competitive third party access to the transmission system and a functioning virtual gas trading mechanism). Bulgaria is yet to secure any alternative to the Russian gas, might lose the biggest source of liquidity after 2019 if Gazprom were

to stop the transit through Ukraine and the Balkans, and has so far failed to establish a transparent regulatory framework for liberalized gas trading.

Most of the hub-related projects are concerned with the expansion and modernization of existing gas transmission infrastructure, reportedly in preparation for major gas exports from Bulgaria to Central Europe via Serbia. Cost estimates vary between EUR 1.8 bn and EUR 2.8 bn, coincidentally equaling the Bulgarian stake in the former South Stream project on Bulgarian territory. To justify the Balkan Gas Hub idea, the Bulgarian government is gearing up to win the competition for the exit route on the planned 15.75 bn m³/yr TurkStream 2 pipeline.⁷ If this plan materializes, the new Russia-led Balkan project would mirror the route of the defunct South Stream.⁸ The result will be preserving the **dependence on Russian gas** at the backdrop of enormous, **unnecessary infrastructure spending** that would feed powerful pro-Russian oligarchic networks in the country.

The government's active negotiation for a new Russia-led pipeline to pass through Bulgaria undermines Bulgargaz' bargaining position due to the ongoing talks for a new pricing formula and supply terms with Gazprom. The Russian company might link the new contractual framework with a Bulgarian commitment for a "South Stream lite" – an agreement similar to the one in 2012, in which Gazprom lowered the gas price for Bulgaria by 20 % in exchange for the government's commitment to the then version of South Stream.⁹ This prompted the EU investigation against Gazprom that in May 2018 led to the Russian company's commitments to the renegotiation of shipping and purchase contracts with eight CEE countries.

The Gas – Electricity Nexus

Affordable gas supply is the most sustainable energy alternative for Bulgaria, especially if it replaces coal, wood, and electricity as the main heating sources in the residential sector. The natural gas will also gain critical importance as the energy transition to a low-carbon economy proceeds. In all **scenarios for decarbonization of electricity generation until 2050**, natural gas will be a **transition fuel** replacing coal in power plants post 2030.¹⁰ Gas-fired electricity production facilities are, however, also expected to be phased out from the market before 2050 on the back of rising CO₂ emission prices and increasing competitiveness of renewable-energy-based generation.

Even without a concerted policy for decarbonization, **natural gas utilization rates** rise to around 13 % of total generation (generation capacity operating on gas triples in the period until 2040), which means heavier dependence on imports, unless domestic sources are included in the supply mix. The latter is quite uncertain, as Bulgaria imposed an unconventional gas exploration and production moratorium in 2012, while the search for gas in the Black Sea offshore fields is yet to prove substantial reserves. Finding the **right balance in promoting natural gas in the electricity sector** would be critical because overbuilding new gas-fired power plants can result in stranded assets. Expanding the use of natural gas in the electricity sector during a period of increasing power and gas prices could have a negative impact on energy poverty. Due to the proximity of IGB's exit point near Stara Zagora, it would make more economic sense for the largest lignite-fired power plants in the Maritsa East Complex to switch to natural gas in the medium term.

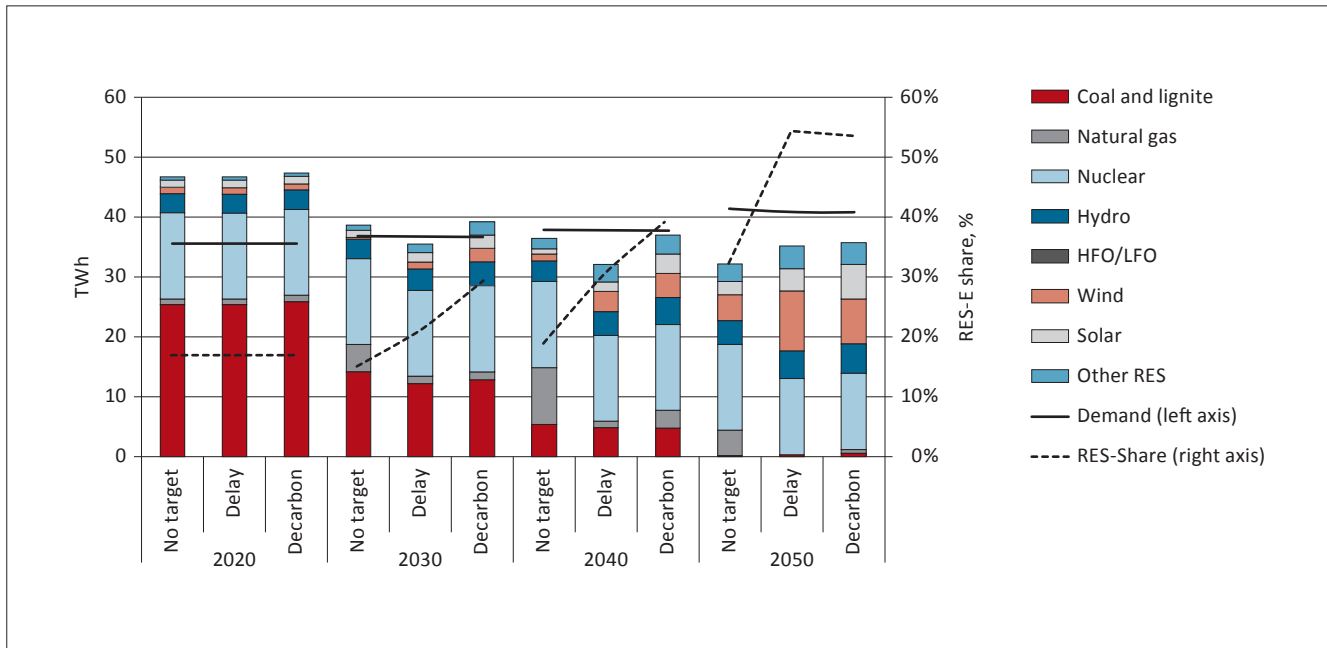
⁷ Vladimirov, M. "Can Russia Use Energy to Renew Its Grip on Bulgaria?". *BalkanInsight*. 1 June 2018.

⁸ Bulgartransgaz announced that five companies had expressed interest in booking up to 54.6 mn m³/day at the Bulgaria – Turkey border, while only 34.4 mn m³/d would reach the Serbian border. The TSO puts the price tag of the new "South Stream lite" at EUR 1.5 bn, but it is hard to imagine that such a pipeline could be built in less than 24 months.

⁹ Stefanov, R. and Vladimirov, M. (2014). "Bulgaria and the South Stream Pipeline Project: At the Crossroad of Energy Security and State Capture Risks". *Suedosteuroopa Mitteilungen*: 05-06.

¹⁰ CSD (2017). *CSD Policy Brief No. 70: A Roadmap for the Development of the Bulgarian Electricity Sector within the EU Until 2050: Focus on Fundamentals*. Sofia: Center for the Study of Democracy.

Figure 3. Electricity generation and demand (TWh) and renewable energy share (% of demand) in Bulgaria, 2020 – 2050 (three scenarios)¹¹



Source: SEERMAP Bulgaria Report, 2017.

Natural gas could play a much bigger role in **transforming household heating choices**. Currently, only 2.5 % of households have direct access to gas, as fixed costs for gasification remain prohibitively high and public support schemes limited. Meanwhile, the inefficient management of the central heating plants, the dilapidated infrastructure and the lack of billing transparency have pushed thousands of urban households to switch to electricity leading to peak demand periods in the winter and public discontent whenever electricity prices are raised. Therefore, close to half of the population uses wood and coal for heating during the winter, contributing to extreme air pollution in many Bulgarian towns.¹²

Towards a Coherent Energy Security Strategy for Bulgaria and Southeast Europe

Improving the energy security of Bulgaria requires further focus on the liberalization and diversification of the national and regional gas supply:

- First and foremost, the government should **finalize the procurement procedures for the IGB and execute the construction** according to the time schedule. A potential delay could undermine the contractual obligations of Bulgargaz for buying natural gas from the Shah Deniz field via the Trans-Adriatic Pipeline by the end of 2020. There

¹¹ Based on data and modelling used by the European Commission, three scenarios for the decarbonization of the Bulgarian electricity sector until 2050 have been developed including: 1) "No target" reflecting the implementation of current energy policies but without a future target for CO₂ emissions reductions; 2) "Decarbonization" scenario including a long-term strategy for reducing CO₂ emissions by 96.7 % by 2050; and 3) "Delayed" scenario involving an initial implementation of the current energy policy and investment strategy followed by an abrupt decarbonization change of policy direction in 2035 resulting in almost the same CO₂ reduction by 2050.

¹² Shentov, O. et al. (2011). *Green Energy Governance in Bulgaria at a Crossroads*. Sofia: Center for the Study of Democracy; Mancheva, D. et al. (2012). *Green Growth and Sustainable Development for Bulgaria: Setting the Priorities*. Sofia: Friedrich Ebert Foundation.

is a need to better fend off constant procedural attacks launched by Russian proxy companies.

- The government should expand its efforts to **attract additional interest from gas shipping companies interested in selling in the SEE** region, including via the LNG regasification terminal at Revithousa in Greece and the planned new floating facility near Alexandroupolis, only a short distance from IGB's entry point.
- With global gas supply competition rising, there has never been a better moment for Bulgaria and Southeast Europe **to tap into the global LNG market**. The inflows of LNG could create a much needed push for market integration, liberalization and diversification. For strategic volumes to enter the SEE market, Bulgarian and Greek policy-makers should commit to eliminating pipeline bottlenecks that impose a negative premium on prices of LNG gas to the region.
- Gas TSOs should accelerate efforts to synchronize transmission capacity rules to **allow the trading of bundled capacity products for gas deliveries** to the much larger markets in Austria and Ukraine.
- A **true regional gas market integration** will not be possible without the completion of the Interconnector Bulgaria-Serbia (IBS), and the reverse flow connections with Romania at the Ruse-Giurgiu pipeline and with Turkey at the Trans-Balkan transit line.
- 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. The expansion of the storage capacity will provide the country with a better peak demand management mechanism, and is a key prerequisite for the development of a gas trading hub.
- **The role of natural gas as a transition fuel** within a broader energy policy strategy of decarbonization that reduces CO₂ emissions in the electricity generation sector by almost 100 % by 2050 needs to be enhanced. Gas could be utilized most efficiently in the lignite-fired power plants in the Maritsa East basin close to IGB's exit point, as well as a cleaner and more efficient household heating source.

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