Instytut Europy Środkowej

IEŚ Commentaries

Editorial Team: Beata Surmacz (Director of ICE), Tomasz Stępniewski (Deputy Director of ICE), Agnieszka Zajdel (Editorial Assistant), Aleksandra Kuczyńska-Zonik, Jakub Olchowski, Konrad Pawłowski, Agata Tatarenko

No. 1124 (99/2024) | 16.05.2024

ISSN 2657-6996

Michał Paszkowski

Moldova: potential problems with electricity availability in 2025

Moldova finds itself in a unique situation regarding electricity availability, which is sourced almost entirely from its breakaway region of Transnistria (which is not recognised by the majority of the international community). Energy is supplied from the Cuciurgani-Moldavskaya GRES (MGRES) power plant, which does not pay for natural gas from the Russian Federation. The planned termination of the Russian-Ukrainian transit agreement for the transportation of natural gas in 2025 could have adverse effects on the availability of electricity in Moldova and pose a threat to the country's energy security.

Specifics of electricity supply. The provision of electricity in Moldova operates through two main channels: domestic generation and external sourcing. Domestically, electricity is produced by two thermal power plants in Chișinău, one thermal power plant in Bălți, eight smaller thermal power plants situated across the country, and a hydroelectric power plant in Costești. Collectively, these facilities can meet up to approximately 20% of the nation's energy demands (although in 2022, this figure stood at around 18%). In terms of energy sources, the primary contributors are natural gas and renewables such as solar, wind, and hydropower. Externally, Moldova imports electricity from various sources, including Transnistria's Cuciurgani-Moldavskaya GRES (MGRES) power plant, under the ownership of the Russian company Inter-RAO. Additionally, imports are sourced from Romania and occasionally Ukraine. These external supply arrangements accounted for approximately 82% of domestic energy needs in 2022. Simultaneously, sourcing from Transnistria remains the most cost-effective option, whereas procuring electricity from Romania comes at a higher cost. Consequently, imports from Romania complement the domestic supply. While electricity has been imported from Ukraine in the past, the uncertainty arises from Russian attacks on electricity installations in Ukraine, rendering this import direction unpredictable. Concerning Transnistria, the MGRES power plant does not pay for natural gas from the Russian Federation via Ukrainian territory. Instead, it utilizes the generated electricity for the needs of the separatist territory and sells it to the Republic of Moldova at prices lower than the market rate.

Potential scenarios for securing energy supplies. Over the years, the supply of electricity from Transnistria has been a crucial aspect of political discourse and a significant factor impacting Moldova's energy security. The Russian-Ukrainian conflict in 2022 injected uncertainty into natural gas supplies for Moldova and its breakaway region. Currently, the transportation of commodities from Russia to Transnistria (managed by the Moldovagaz company) is facilitated through Ukrainian territory, where a five-year Russian-Ukrainian natural gas transit agreement remains in effect. However, the corresponding Russian-Ukrainian transit agreement, signed in 2019, is set to expire by the end of 2024. In this context, numerous uncertainties loom over the availability of natural gas for MGRES power plants. Regarding the supply of natural gas to the Republic of Moldova, it is overseen mostly by the state-owned energy company Energocom[1]. This entity has the capability to import natural gas from various directions via existing pipelines, including from the north (Ukraine) and south (Romania, including LNG supplies from Greece). Given these circumstances, four scenarios for developments from 2025 can be discerned. The first scenario involves the continuation of natural gas supplies via the Ukrainian route. However, recent indications from Kiev suggest that this option is practically unattainable. Ukraine has signalled its unwillingness to renew its transit agreement with the Russian Federation, citing its refusal to financially

[1] Recently, a stock exchange for natural gas was launched in Moldova, and many large enterprises have started to register and acquire natural gas through it. As a result, various companies have won tenders. Other private companies and suppliers are also importing natural gas from the European market. Nevertheless, Energocom is the biggest.

support the aggressor. Furthermore, in this scenario, Ukraine is unlikely to grant Gazprom access to the TurkStream/Balkan Stream pipeline or allow reverse flow through the Trans-Balkan pipeline to supply natural gas to the MGRES from the south. This is due to the intricacies of the existing natural gas infrastructure, which necessitates the transit of commodities through Ukrainian territory (at the Isaccea-Orlovka point) before reaching Moldova from the south. The second scenario involves Moldovagaz purchasing natural gas from Energocom for MGRES, sourced from southern directions. In this scenario, Energocom would decide both the source of the natural gas and the purchase price. This approach would grant Moldova greater influence over Transnistria and effectively result in Chisinau determining the functioning of the separatist region. However, financially, this would present challenges for both Moldova (resulting in higher electricity prices) and Transnistria (diminishing the competitiveness of the separatist region). The third scenario entails halting natural gas supplies from Ukraine to Transnistria, thereby rendering the MGRES power plant inoperative. This scenario would precipitate numerous economic and humanitarian challenges because the collapse of Transnistria will be triggered by the cancellation of the electricity trading contract with the official government, triggering a humanitarian crisis. This type of "accelerated" integration of Moldova with Transnistria is not the most favourable solution for either side, and its materialization in this form is rather unlikely. At the same time, Moldova would have to purchase more expensive electricity from Romania and ensure supplies to Transnistria as well. The fourth scenario involves importing Russian natural gas through the TurkStream and Trans-Balkan pipelines, and via the Romanian transmission system, to deliver it to Moldova at the Ungheni Interconnection Point. This route would not be affected by Ukrainian approvals. This scenario seems to be the best solution. Nevertheless, the government in Chisinau still hopes that from 2025, the situation will be stable and somehow the transit of natural gas through Ukrainian territory will be maintained. Such a solution for Moldova's energy security seems to be the most beneficial.

Problems and prospects for the energy system. At present, efforts are underway at the regulatory and investment levels to address the current challenges in ensuring Moldova's energy security. The existing power grid connections with neighbouring countries encompass over a dozen high-voltage lines of varying capacities: one with Romania (at 400 kV voltage, serving MGRES), seven lines with Ukraine (at 330 kV voltage), as well as eleven lines with Ukraine (at 110 kV voltage) and three lines with Romania (at 110 kV voltage). For years, Moldova has been synchronized with the Integrated Power System/Unified Power System of Russia (IPS/UPS), headquartered in Moscow, which covers the majority of post-Soviet states. However, in March 2022, Moldova (in collaboration with Ukraine) synchronized its electricity grid with the European Continental System (CESA). This synchronization enables electricity supplies from European Union countries. Nonetheless, it is worth noting that the power grid (at 400 kV) facilitating energy supplies from Romania to Moldova is routed through Transnistria before reaching the Republic of Moldova. At present, there is no direct high-power line linking Moldova with Romania. To address this issue, the construction of the Chisinau-Vulcanesti power line (at 400 kV) is underway and expected to be completed by the end of 2025, with an estimated cost of approximately 27 million EUR. Additionally, in March 2024, a loan agreement between Moldova and the European Bank for Reconstruction and Development (EBRD) was approved for the construction of another high-voltage (400 kV) line with Romania, known as the Bălți-Suceava interconnection. The completion of the first connection will enhance Moldova's electricity system's independence from Transnistria, thereby bolstering energy security.

Conclusions

- The Russian-Ukrainian conflict has markedly altered the threat perception in Moldova, particularly in the energy realm. Currently, the situation is stable, but from 2025 onwards, with the conclusion of the Russian-Ukrainian transit agreement, the challenge will be to ensure the availability of natural gas for MGRES power plants, and consequently, the electricity supply to Moldova.
- Regarding natural gas availability, the measures implemented mostly by state-owned Energocom have yielded favourable outcomes for Moldova. However, the operation of the MGRES power plant remains a significant challenge. Several scenarios have been proposed to secure the supply of natural gas to the

power plant, yet only one is deemed optimal at present (Moldovagaz imports natural gas from Gazprom in the southern direction via Romania).

- Irrespective of the potential scenarios, it is anticipated that electricity prices for end-users in Moldova will continue to rise. Consequently, escalating prices may impact the approval ratings of President Mai Sandu, who is seeking re-election ("IEŚ Commentaries", no. 1037), as well as the broader pro-Western camp.