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## Natural gas demand decline in the Baltic countries in 2023

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**The Baltic countries have recorded another consecutive year of declining natural gas demand in 2023. Initially, such a situation was related to the COVID-19 pandemic and high commodity prices on exchanges in Europe (the result of price manipulation by Russia in 2021 and then the Russian-Ukrainian war in 2022). It is now expected that the projected economic growth in 2024 and the stabilization of natural gas prices in Europe may contribute to an increase in the consumption of this commodity across the region.**

**Lithuania.** Natural gas demand in this country accounts for 56% of the total consumption in the Baltics. In Lithuania, this commodity is mainly used for industrial purposes, most notably for the production of ammonia, used in the manufacture of fertilizers by the Achema company at its plant in Janovo, which accounts for 50% of Lithuania's natural gas consumption. In addition, this commodity is used in the generation of electricity at thermal power plants and also for cooking in rural areas (it is less often used for heating purposes). Since 2012, lower consumption has been recorded for two main reasons; first, natural gas has been replaced primarily by biomass in some of the old, run-down thermal power plants, and second, the level of consumption is closely linked to Achema's demand. The plant had been operating at a low level since 2021 due to high natural gas prices and partially resumed operation of one of its two generating units in October 2023. Again, as of November 2023, the plant is undergoing maintenance. In 2023, there was another decrease in natural gas consumption (4% compared to 2022), due to the warm winter in the 2022/2023 fall/winter season and high natural gas prices on markets in early 2023. During this period, demand for natural gas increased, mainly for electricity generation.

Natural gas demand is expected to increase in 2024 for three reasons: firstly, the stabilization of natural gas prices, which is taking place despite the ongoing Russian-Ukrainian war. Currently, the warm winter has meant that consumption of this commodity for heating purposes remains low, which affects the price of natural gas. A certain exception was the situation in January 2024, when there was a cold wave that significantly increased demand for electricity and heat. It is expected that the level of accumulated stocks in the European Union countries should be high at the end of the 2023/2024 heating season, which will stabilize the price in Europe. Secondly, the realization of supplies together with a smoothly functioning import infrastructure. At the moment, 85% of Lithuania's natural gas supply takes place through the Klaipeda LNG terminal, and deliveries are carried out without hindrance. Thirdly, economic growth, which the International Monetary Fund (IMF) estimates to be 2.7% versus a decline of 0.2% in 2023.

**Latvia.** The country's demand for natural gas is about 31% of total consumption in the Baltic countries, and this commodity is used primarily for electricity generation and heating. The largest role in this regard is played by power plants and combined heat and power plants in Riga (the CHPP-1 and CHPP-2 plants, owned by Latvenergo)<sup>1</sup>. In 2023, there was a decrease in demand for natural gas (by 6%) as a result of high prices in Europe and high levels of hydroelectric power generation (thanks to favourable weather conditions). At the beginning of 2024, high levels in underground gas storage facilities in Europe and the warm winter mean that current market conditions, along with projected economic growth, should fully determine the condition of the country's natural gas market. According to IMF estimates, Latvia's GDP is expected to grow by 2.6% in 2024, compared to 0.5% in

<sup>1</sup> A. Kuczyńska-Zonik, *Republika Łotewska*, [in:] *Raport. Bezpieczeństwo energetyczne państw Europy Środkowej i Wschodniej*, ed. B. Surmacz, M. Paszkowski, Lublin 2023, pp. 120-121.

2023. At the same time, a policy to move away from fossil fuels will be an element limiting the increased demand for natural gas. For example, in February 2024, the Riga authorities approved legislation stating that from January 1, 2026, no new permits will be issued to install gas boilers in homes. Currently, permits are issued for a period of five years, which means that boilers will be allowed to be installed until 2031.

**Estonia.** The country's natural gas consumption accounts for 13% of the total demand for this commodity in Baltic countries. At the same time, in this country, the largest decrease in demand for this commodity was recorded in 2023 compared to 2022 (by 9%). In general, natural gas plays a minor role in the country's economy (except for heating), which is primarily due to the large share of oil shale in the electricity generation process ("[IEŚ Commentaries](#)", no. 164). In Estonia, natural gas is used for district heating and in boilers, i.e., in households (65%). In addition, biomass plays an important role (35%). In 2023, the lower consumption of natural gas was influenced by several factors. First, in 2022-2023, several CHP plants in Estonia received approval to temporarily use other types of fuel (mainly heavy fuel oil) for heat generation, but the approvals were lifted in the fall/winter of 2023/2024. As a result, the return of CHP plants to heat generation based on natural gas meant that consumption of this commodity increased significantly at the end of 2023 but was not so significant as to offset the decline throughout 2023. Second, the government continued its efforts to reduce the demand for natural gas in district heating and households for heating purposes, and in this regard, it plans to increase the share of renewables (RES). Third, the government has maintained regulations to ensure that consumers are protected from rising natural gas prices. Despite this, many people are looking for other cheaper solutions.

In 2024, an increase in consumption of this commodity can be expected due to the inability of thermal power plants to use heavy fuel oil and an improvement in the economic situation (according to IMF forecasts, GDP growth of 2.4% is expected in 2024, compared to a decline of 2.3% in 2023). The final level of demand will also be influenced by the price of natural gas in Europe. Nevertheless, the government can be expected to continue its efforts to reduce the use of natural gas in the Estonian economy in the coming years, with a partial increase in the share of biomethane.

#### Conclusions:

- The level of demand for natural gas in the Baltic countries in recent years has been closely correlated with the price of this commodity in Europe. A large increase in prices, as a result of market manipulation by the Russian Federation in 2021, caused the level of consumption to be significantly reduced (Lithuania, Latvia, and Estonia combined saw a 33% drop in demand in 2022 compared to 2021).
- In 2024, consumption can be expected to increase, which may be due to the projected stabilization of natural gas prices. Such a situation may occur as a result of underground gas storage filling levels in facilities in Europe, which causes a decline in prices. In the current environment, natural gas can be expected to be supplied through the Klaipeda LG terminal and the GIPL pipeline connecting Poland with Lithuania, among others. In addition, repairs to the Balticconnector pipeline should be completed in the first half of April 2024.
- The demand for natural gas in Lithuania, Latvia, and Estonia will be strongly influenced in the long term primarily by EU regulations and the ongoing energy transition process, including, among others, efforts to increase the share of RES in the energy mix. There is full confidence in the Baltic countries that the next step in increasing energy security will be to activate efforts to implement RES projects. An important element in enhancing the security of these countries is membership in the International Energy Agency ("[IEŚ Commentaries](#)", no. 257)<sup>2</sup>.

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<sup>2</sup> Estonia joined the IEA in 2014, Lithuania in 2022, and Latvia in 2024.