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LNG terminals in Central Europe: importance and operation

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There are several LNG regasification terminals in Central European countries, aimed at securing natural gas supplies from various directions. In the context of the outbreak of the Russian-Ukrainian war, the importance of these terminals has definitely increased. At present, they are a key tool in efforts to diversify the sources and directions of natural gas supplies, especially in connection with the ongoing process of derusification of the energy sector in Europe. In contrast, there are limited opportunities for new investments in the area.

LNG terminals in Central Europe. In 2023, the countries of Central Europe continued the process of changing the structure of natural gas supply ("IEŚ Commentaries", no. 1027), with LNG terminals playing an important role in this regard. On the Baltic Sea, terminals of this type operate in Poland (Swinoujście), Lithuania (Klaipėda) and Finland (Hamina, Inkoo), while on the Adriatic Sea in Croatia (Krk). The importance of these facilities is crucial, as they allow access to the international natural gas market and the implementation of countries' strategies to reduce the supply of natural gas from the Russian Federation. As of 2023, four regasification terminals have been commissioned across Europe: in France, Italy and Germany, two such facilities have been abandoned (Poland, Latvia), and import capacity expansion is already underway or under consideration for three terminals (Poland, Lithuania, Croatia), and one such station is under construction (Poland).

Poland. The LNG terminal operating in Swinoujście, with an import capacity of 6.2 bcm/year, plays a key role in ensuring natural gas supplies to Poland and other Central European countries. The infrastructure, which has been developed over the years, allows for the export of natural gas to southern Europe via the Poland-Slovakia interconnector and to the Baltic States via the Poland-Lithuania interconnector (GIPL). Significantly, the natural gas pipeline connecting Poland and Lithuania is reversible, which also allows natural gas supplies from the Klaipėda LNG terminal to Poland, which took place in 2023. The expansion of the terminal (construction of a third tank) is scheduled to be completed in 2024, and the increased import capacity will be 8.3 bcm/year. At the same time, work is underway on the construction of an FSRU-type LNG terminal in Gdansk with a regasification capacity of 6.1 bcm/year. With regard to sources of supply, it should be noted that the most important role in imports is played by the US and Qatar, which together accounted for 97% of supplies in 2023.

Lithuania. In the Baltic States, until recently, only the Klaipėda LNG terminal in Lithuania was in operation, with an import capacity of about 3.75 bcm/year, which allowed the market, primarily in the Baltic States, to be optimally supplied with natural gas. In 2023, natural gas supplies through this terminal declined by 7% compared to 2022. The reduced supplies were influenced by three factors. First – the continued process of diversification of natural gas supplies as a result of the Russian-Ukrainian war. Second – the opening of the Inkoo LNG terminal, which resulted in the Baltic states, which use the terminal, having part of their natural gas supplies – until the Balticconnector pipeline was damaged in October 2023 – were realized from Finland. Third – the difficult economic situation and high natural gas prices, which translated, among other things, into lower ammonia production by Achema (responsible for 50% of Lithuania's natural gas imports). In terms of supply directions, there was a decline in imports from the US in 2023, but an increase from Norway. At the same time, there were also sporadic deliveries from Trinidad and Tobago and Nigeria during the period. Significantly, at the end of December 2023, AB Klaipėdos nafta (as of January 10, 2024, LN Energijos AB) and AB Amber Grid announced a non-binding Open Season procedure to test the companies' interest in the terminal's additional regasification capacity (2.5 bcm/year, meaning it could eventually have an import capacity of 6.25 bcm/year). The planned expansion of the terminal – if there is interest from market participants – would take place by mid-2026. The

damage to the Balticconnector pipeline, which connects Finland and Estonia, prompted the Baltic states, including Estonia in particular, to increase imports through the Klaipeda LNG terminal.

Finland. There are four LNG terminals in Finland: in Pori, Tornio, Hamina and Inkoo, but only the last two have the ability to inject natural gas into the transmission system (the terminals in Pori and Tornio supply natural gas point-to-point, to companies operating in those cities). The terminals in Hamina (established in 2022) and Inkoo (2023 – a joint Finnish-Estonian project) have the biggest impact on the natural gas market. In 2023, the largest suppliers of natural gas to Finland were the US and Norway (combined 76%). Supplies from the Russian Federation (10%) were also noted, but Gasum does not make public information on when this contract will end. The Finnish government plans to stop such supplies on its own from 2025 (legislation is pending), due to the lack of sanctions at the European Union level. The Inkoo LNG terminal currently plays an important role in balancing the demand for natural gas in Finland alone, especially during the period of extreme cold weather, which occurred in early January 2024 (Gasgrid ordered an additional LNG tanker at that time).

Croatia. The Adriatic Sea region has a regasification terminal on the island of Krk in Croatia, and the country is slowly beginning to play an increasingly important role as a regional natural gas hub ("IEŚ Commentaries", no. 829). In 2023, imports to the terminal fell by 11%, primarily due to very large deliveries in 2022 (up 45% from 2021). In terms of import destinations, it should be noted that the key role in 2023 was played by the US, as well as Trinidad and Tobago, which together accounted for 95% of deliveries. Currently, the terminal's import capacity is 2.9 bcm/year, but is expected to increase to 6.1 bcm/year by 2025. Interest in increasing import capacity has been shown by Austria, Bosnia and Herzegovina, Slovenia, Hungary and Germany (the state of Bavaria), among others. A key element will be the expansion of transport capacity in the region (construction of new interconnectors).

Prospects for new terminals. The construction of new LNG terminals in Central Europe seems doubtful. Despite the consideration of various types of projects, the level of natural gas availability in the region is already ensured by existing terminals and pipelines. Therefore, there may be difficulties in fully utilizing new terminals. It is now known that an LNG terminal in Skulte, Latvia, will not be built in the region ("IEŚ Commentaries", no. 993). On the other hand, the construction of a regasification terminal in Gdansk, where all import capacity is guaranteed by ORLEN S.A., is certain. At the same time, import capacity in Central European countries will increase with the expansion of terminals in Swinoujscie, potentially in Klaipeda, but also on Krk Island. There are currently plans for new terminals in Odessa (Ukraine) and Constanta (Romania), but the chances of these investments are limited due to the ongoing Russian-Ukrainian war and potential instability in the Black Sea region. Additionally, the lack of financial support from the European Union may be a problem, as the new list of projects of common interest (PCI) does not include investments in the natural gas sector (hydrogen projects, among others, may receive support).

Conclusion:

- LNG terminals in Central Europe play an extremely important role in ensuring regional energy security. However, a large impact on the potential expansion of import capacity will be driven by corporate interest in such projects. Good examples illustrating the prospects for the construction of new LNG terminals are the Latvian government's withdrawal of support for the implementation of the terminal project in Skulte (4.1 bcm/year) and the lack of interest from potential customers in a second FSRU-type LNG terminal in Gdansk (4.5 bcm/year).
- The interest of Central European countries, especially those with access to sea basins, in the operation of LNG terminals has been evident for many years, and has increased with the outbreak of the Russian-Ukrainian war. To date, there has been no ban on the import of natural gas from the Russian Federation, but many companies and countries are independently abandoning supplies from that country. Importantly, the process of diversifying the sources and directions of supply will be extremely difficult, especially since in many cases contracts are still in force for the import of natural gas from the East both

by land (Hungary, Slovakia, Serbia, Croatia, Bosnia and Herzegovina, Northern Macedonia, among others) and by sea (Finland). Only the introduction of pan-European restrictions could lead to a change in the direction of natural gas supplies to Central European countries as well. Such sanctions would further increase interest in LNG terminals.