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Natural Gas for the Transport Sector: Gazprom's New Market

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In the coming years, the popularity of natural gas as a road and maritime transport fuel is expected to grow. Gazprom recognises this trend and is investing not only in huge projects like Nord Stream 2 but also in small-scale LNG terminals (ssLNG), which allow smaller gas deliveries to consumers. Gazprom's strategy to secure a stake in this market as a competitive supplier. Russia's activity in this area will pose a challenge to Polish ports and could complicate Poland's plans to more broadly use natural gas in its domestic transport sector.

CNG/LNG for Transport Market Development. The increase in natural gas use in transport will be stimulated by international climate regulations (impacting both road and maritime transport) as well as the efficiency of liquified natural gas (LNG) and compressed natural gas (CNG) as fuel for heavy-duty vehicles, public transport, and ships. EU regulations and the International Maritime Organisation have imposed a cap on members on sulphur emissions from 2020. Furthermore, the EU's strategy aims to limit CO_2 emissions in transport. This is supported by Directive 2014/94/EU, in which one of the goals is to develop infrastructure for alternative fuel usage through the Trans-European Network for Transport (TEN-T) and bunkering infrastructure in the ports. According to long-term forecasts by, for example, the U.S. government or international energy companies (ExxonMobil, Statoil), the demand for natural gas in transport will grow. By 2040, the share of natural gas among transport fuels will rise to 5%, from 1% in 2015. This trend is also acknowledged in forecasts by the Analytical Center for the Government of the Russian Federation and in Gazprom documents.

Gazprom and LNG/CNG. Gazprom had not focused on LNG for a long time, but recent investments and initiatives indicate a greater emphasis on LNG, ssLNG[1] and natural gas for transport markets. Along with LNG major Shell, Gazprom invests mainly in the Baltic region's LNG export terminal at Ust-Luga, which will also allow deliveries of ssLNG. Gazprom and companies connected to it also are developing smaller LNG terminals near the EU border (e.g., in the Republic of Karelia, Leningrad Oblast, Pskov Oblast, Kaliningrad), which will allow exports of LNG by land and sea. Gazprom also has partnered with Gorskaya LNG, a company that plans to establish LNG bunkering centres in several Baltic Ports, and with Russian Railways, which receives LNG for trains from the energy giant. Furthermore, the Russian Ministry of Natural Resources is working on legislation to make vessels working in the Arctic use natural gas as their prime fuel to avoid diesel pollution.

Gazprom also recognises the potential of this market abroad. The company aims to build a small LNG terminal and hub in Rostock, Germany. In 2016, the company bunkered an LNG-fuelled ship from an LNG-container equipped truck for the first time in the port. Gazprom is also developing a chain of LNG/CNG stations for road transport in the EU. Most recent data indicate Gazprom and Gazprom-controlled Vemex

[1] B. Bieliszczuk, "LNG Developing Rapidly in the Baltic Sea Region," *PISM Bulletin*, no. 46 (986), 15 May 2017.

owned 70 fuelling points: 50 in Germany, 16 in Czech Republic, and four in Poland (in Gdynia, Olsztyn, Warsaw, Częstochowa; data does not include a fifth station in Wielkopolski Voivodeship—Cryogas M&T Poland, which has ties to Gazprom). Gazprom's annual report states that the company sold 11.5 mcm of gas through its CNG/LNG stations in the EU, compared to 8.6 mcm in 2015—in Germany, sales rose from 5.7 mcm to 7.5 mcm, and in Poland, from 1.9 mcm to 2.9 mcm. According to the report, outside the EU and Russia, Gazprom had stations operating in Serbia (two stations, with 0.7 mcm in sales), Belarus (27 stations, 20.3 mcm), Armenia (eight stations, 8.6 mcm), Kyrgyzstan (four stations, 2.7 mcm). In Russia, Gazprom owns 254 stations. Outside the EU, the Russian giant is investing in natural gas for the transport sector in China, Vietnam, and Bolivia. Vemex also supplies natural gas to other companies' stations.

Gazprom promotes natural gas for road transport and has been organising since 2008, together with its European partners (including Volvo, Iveco, Fluxys, Engie), the "Blue Corridor"—road rallies of gas-fuelled vehicles in Europe and Russia. Gazprom also cooperates with Audi and is in talks with Volkswagen regarding gas deliveries for its cars.

Gazprom on the Polish CNG/LNG market. Poland, with 28 CNG/LNG stations, is a rather small market compared to Germany (885 stations) or even Czech Republic (143 stations), but it has big growth potential. The Polish Ministry of Energy forecasts that by 2025, there will be more than 50,000 natural gas vehicles on Polish roads (currently about 3,600) and more than 100 fuelling points. Bunkering centres will be built in Gdańsk, Gdynia, Szczecin, and at LNG terminal in Świnoujście. The Polish government is also about to introduce tax breaks for ecological fuels for transport, which will give added impetus to the sector's development. This potential is recognised by Polish state-owned energy major PGNiG, which negotiates gas deliveries for municipal public transport. Irrespective of the central government's actions, some municipalities are already investing in public transport and utilities fleets fuelled by natural gas, which Gazprom takes advantage of.

Through its LNG exports to Poland, Gazprom is in a good position on the market. The Russian giant and companies connected to it have licenses to trade gas with foreign partners (three companies now), which creates an import channel for small quantities of LNG to Poland. Two of the three companies own LNG/CNG stations in Poland and the third offers deliveries, stating that it has access to its own LNG sources. It is not the first time. LNG from Russia was imported, for example, by Polish company Duon. Furthermore, legislation on mandatory fuel reserves, updated recently by the Polish government (it requires maintaining gas reserves and pipeline capacity to ship it if stored abroad, even for importers of smaller quantities of gas) should not have a significant impact on the Russian companies. These reserves can be stored in other EU countries and Gazprom owns gas-storage facilities in Germany. The available capacity of Polish-German gas links can easily cover the small volume of deliveries.

Despite the small number of stations in Poland, CNG/LNG sales by Gazprom (2.9 mcm) have risen dynamically by more than 50% year on year. Cooperation with Polish entities could help Gazprom stimulate both supply and demand in the region. Thanks to the cooperation between Gazprom Germania and the Polish producer of gas-fuelled buses, Solbus (according to Gazprom, the first city buses fuelled by LNG launched in Europe), the Russian company can offer both a gas-fuelled transport fleet and competitive prices for gas under long-term agreements (according to Solbus representatives, Gazprom would guarantee the price level). Solbus city buses are on roads in Warsaw, Olsztyn, and a few other places. Some were sold to Estonia (Gazprom has an ssLNG terminal near that country's border) and the companies aim to enter other markets, such as Slovakia's, with their dual offer.

Perspectives. The market for natural gas for transport will grow in the coming years and Gazprom will take advantage of this trend, consequently building its position. Gazprom is expected to cooperate in this area with Western companies or via companies connected to Gazprom and its subsidiaries.

Gazprom's growing presence in natural gas for the maritime transport sector (in Russia and Germany) will create competition for Polish ports—Gdańsk, Gdynia, Szczecin, Świnoujście—located along an important sea route. Despite the relatively small number of LNG/CNG stations for road transport in Poland, Gazprom's strength is access to cheap natural gas, offered along with a public transport fleet to municipalities. This allows the Russian company to make an attractive offer to local authorities and utility companies, bypassing the Polish central government, which could be sceptical of Gazprom's presence in this sector. Therefore, Gazprom does not have to focus on the development of its CNG/LNG station network, but rather on reaching potential buyers.

The volume and the supply of natural gas for transport has not raised red flags in Poland concerning CNG/LNG supplies for this sector in the traditional spheres of energy security: the risk of being cut off or monopolistic practices. The challenge for Poland is rather the competition from Gazprom and Russian companies in such a promising segment.