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Crude oil terminals in Central European countries in the era of the shift away from Russian commodities

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There are six crude oil terminals in the Central European countries of the European Union, supplying a total of sixteen refineries, several of which are located outside the EU. Due to the ongoing Russian-Ukrainian war, these terminals have been unloading tankers from countries that have not previously supplied crude oil to these refineries, or if they have, sporadically, in 2023. The process of moving away from importing crude oil from the Russian Federation will be difficult, but the 2023 data indicates that such actions have already been taken and will probably continue in many cases.

Baltic Sea. There are two key receiving points for crude oil delivered by sea in this region - in Poland (Gdansk crude oil terminal) and Lithuania (Butinga loading buoy)¹. The Gdansk crude oil terminal supplies a total of four refineries, two each in Poland (Plock, Gdansk) and Germany (Schwedt, Spergau), which makes it difficult to identify which refinery processes which grades of crude oil. The terminal is capable of supplying all of the four refineries mentioned², but the limited capacity of the Pomeranian pipeline, which sends crude oil south, poses some challenges. Conceptual work is currently underway on the construction of a second pipeline, which would optimize crude oil supplies to Plock and the two refineries in Germany. However, due to the continued supply of KEBCO crude oil from Kazakhstan to the Schwedt refinery via the Druzhba pipeline, a final decision on this investment has not yet been made. In 2023, all four refineries, in Poland and Germany, imported 39 different grades of crude oil through the Gdansk terminal, with the majority being single cargoes. Interestingly, the first 10 grades together accounted for 85% of deliveries. Cargoes from Saudi Arabia (Arab Light grade) and Norway (Johan Sverdrup grade) dominated, accounting for a total of 64% of all deliveries. There were also tankers from new destinations, including Angola, Guyana and Brazil.

In 2023, there were significant changes in the supply of crude oil to the refinery and unloading this commodity in Butinge, Lithuania. At the beginning of the Russian-Ukrainian war in 2022, the Mažeikiai plant of ORLEN Lietuva (a subsidiary of ORLEN) gave up supplies from the Russian Federation (Urals grade), resulting in a gap that was filled by supplies from other directions, including primarily Saudi Arabia (Arab Light), the US (WTI) and the UK (Ekofisk). The share of supplies from Norway (Johan Sverdrup) also increased to a small extent. Thus, the process of diversion of supplies began as early as the beginning of the war in 2022, and not from the introduction of sanctions on offshore crude oil supplies from the Russian Federation (December 5, 2022). In 2022, the Mažeikiai refinery processed only 16% of crude oil from Russia. Therefore, it began processing crude oil mainly from Saudi Arabia, the UK, Norway and the US, and only continued to do so in 2023.

Black Sea. On the Black Sea, crude oil supplies to refineries are provided by three crude oil terminals, two of which are located in Romania (Midia, Constanta) and one in Bulgaria (Rosenets). The terminals supply four refineries, including three operating in Romania (Petromidia in Năvodari, Petrobrazii and Petrotel in Ploiesti) and one in Bulgaria (Burgas). In the case of terminals located in Romania, there were changes in terms of crude oil

¹ Lithuania also has a crude oil terminal in Klaipėda, but it is mainly used to export crude oil, produced by AB Geonafta (a subsidiary of LOTOS Upstream), and to import liquid fuels. In the past, the terminal also supplied crude oil to refineries in Belarus – deliveries through the terminal continued by rail to the refineries.

² The full use of sea transport (via the Baltic Sea) to deliver crude oil to these refineries was tested in 2019, during the so-called chloride crisis, when shipments of contaminated crude oil from the Russian Federation took place.

supply directions in 2023 compared to 2022. The largest adjustment took place in the handling of crude oil from the Russian Federation, whose share fell from 42% to 3%. Nevertheless, during the same period, the share of KEBCO grade shipments from Kazakhstan increased (to 44%), although there is a high probability that this is crude oil from Russia (["IEŚ Commentaries", no. 1000](#)). Interestingly, in 2022, the share of KEBCO grade unloaded at ports in Romania was 24%. Consequently, it can be assumed that the share of crude oil from the Russian Federation in 2022 fell from 66% (Urals, Siberian Light and KEBCO grades) to 48% in 2023 (KEBCO and Urals grades). There was also a large increase in shipments from other destinations such as Libya (Es Sider), Azerbaijan (CPC Blend, Azeri BTC, Azeri Light), Norway (Johan Sverdrup), Brazil (Sepia) and Guyana (Unity Gold).

With regard to Bulgaria, crude oil handled at the Rosenets terminal is routed to the Burgas refinery. This is the most modern and largest plant in this part of Europe, where high-margin liquid fuels are produced (["IEŚ Commentaries", no. 707](#)). In 2023, - despite declarations related to the need to move away from crude oil imports from the Russian Federation - the terminal primarily unloaded cargoes from that country. The share of supplies from this direction did not change (90% each in 2022 and 2023). The only modification was in the type of commodity supplied from Russia, as in 2022 there were Urals and Siberian Light grades, and in 2023 only Urals. In 2023, there were also crude oil deliveries from Norway (Johan Sverdrup), Egypt (Western Desert), Brazil (Sepia) and Azerbaijan (Azeri BTC). Only a change in the ownership structure of the Burgas refinery could lead to a reduction in the share of crude oil from the Russian Federation³.

Adriatic Sea. There are several crude oil terminals on this sea⁴, with only one in the Central European country of Croatia (Omišalj). Four refineries are supplied through this port: in Croatia (Rijeka), Hungary (Százhalombatta), as well as in Serbia (Pancevo) and Bosnia and Herzegovina (Brod). For this reason, it is difficult to clearly identify which refineries import which grades of crude oil (as in the case of the Gdansk and Constanta terminals). Nevertheless, in terms of the type of tankers unloaded (their directions), it can be assumed that in 2023 the shift away from crude oil supplies from the Russian Federation continued. In 2022, crude oil from Russia accounted for 29% of transshipments (Urals, Novy Port), while in 2023 there were no such supplies. However, crude oil from Kazakhstan (4%), KEBCO grade, was also imported at that time, suggesting that the share of supplies from Russia may have been small at that time. There was an increase in supplies from Norway (Johan Sverdrup) and Azerbaijan (CPC Blend, Azeri Light) during this period. The Omišalj terminal also received crude oil from Libya (Es Sider, Al Jurf), Nigeria (Bonny Light) and the US (WTI).

Conclusions

- In 2023, the process of diversifying the sources of crude oil supply to refineries in Central European countries through crude oil terminals operating in the region continued. Analyzing the realized deliveries, it can be noted that where refineries can import crude oil from the Russian Federation by sea due to the derogations received from the sanctions introduced (Bulgaria, Romania), deliveries from this direction continue. For countries with sanctions in place, such supplies have ceased or are minimal.
- The shift away from commodities from Russia has made it necessary to import cargoes from different parts of the world. Norway and Azerbaijan dominate among the new supply directions. Libya also plays an important role, and partly Brazil and Guyana (in the case of the latter two directions, this is an apparent pan-European trend - more and more refineries in Europe are processing crude oil from these countries). At the same time, 2023 deliveries were made from Kazakhstan, although here the situation is complicated, as it is most likely crude oil from the Russian Federation.

³ The refinery is owned by Lukoil Neftochim Burgas, which is owned by Litasco AS, a Swiss company owned by Lukoil.

⁴ There is also an oil terminal in Trieste on the Adriatic Sea, which allows deliveries via the TAL pipeline to refineries in Austria and Germany, and then via the IKL pipeline to the Czech Republic (Kralupy, Litvínov, which belong to ORLEN).

- For the countries of Central Europe, conflicts in geographically distant regions - for example, the situation in Venezuela and Guyana, where the territorial dispute may affect the volume of crude oil exports, or attacks by the Huti movement in Yemen, which may cause difficulties in the transport of goods through the Red Sea and the Suez Canal - may also be a certain threat in the context of crude oil supplies.