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# The Impact of the Russia-Ukraine War on Europe's LPG and Naphtha Supply

## Executive Summary:

The ongoing conflict between Russia and Ukraine has significant implications for the energy markets, especially in Europe, where the two countries are major suppliers of liquefied petroleum gas (LPG) and naphtha. This whitepaper examines the impact of the Russia-Ukraine war on Europe's LPG and naphtha supply, including the potential risks and opportunities for market players.

## Introduction:

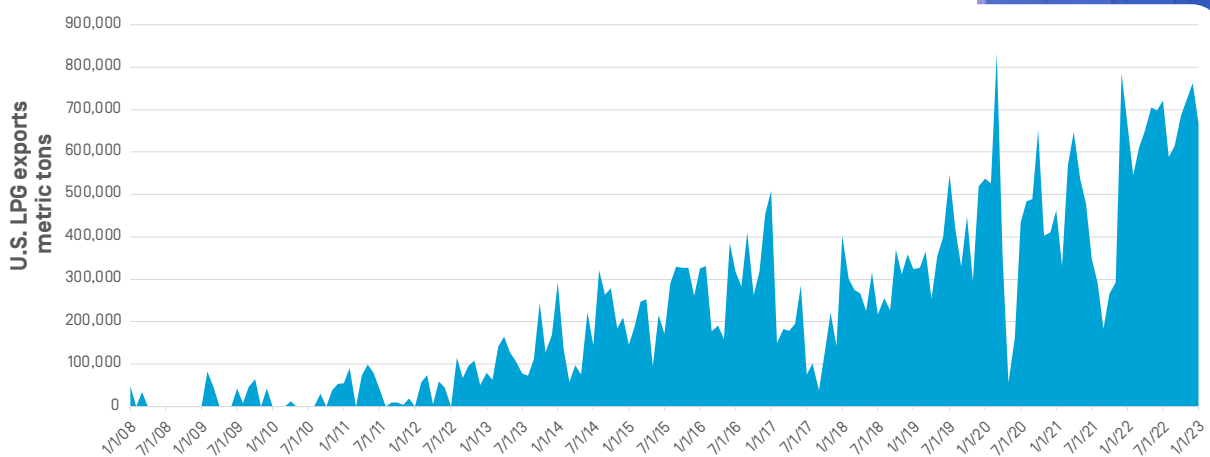
Ukraine is a major transit country for Russian gas, and any disruption to its gas supplies has serious consequences for Europe. Russia's invasion of Ukraine has impacted Europe's supply of LPG and naphtha, two important feedstocks for the petrochemical industry.

This impact has, however, been minimized because European LPG and naphtha buyers and sellers have shunned Russia-sourced cargoes since the invasion of Ukraine in February 2022 and replaced these with alternative supplies.

## LPG and Naphtha Supply:

Following Russia's invasion of Ukraine on Feb. 24, 2022, an embargo on rail shipments of all goods, including LPG, to Ukraine was introduced by the Russian railways. This curtailed severely LPG supplied on Rail Tank Cars (RTCs) from Russia and also Kazakhstan to Ukraine and to Poland via Russia and Belorussian territory.

### U.S. LPG Exports to EU-27 inc U.K. 2008-2023



Before February last year, an estimated 110,000 metric tons/month of Kazak Tengiz-produced LPG was transported via RTC. While estimates vary, market sources suggest around 40,000 mt/month moved to Ukraine, 30,000 mt/month went to Poland, and 20,000 mt/month was transported to Temryuk and a further 20,000 mt/month to Taman, which are two Russian ports on the Black Sea coast that export LPG.

LPG trade via overland RTC has continued but not via Ukraine and in more limited quantities, according to trade sources in central Europe. Russian LPG supply has moved into Poland and other areas of Eastern Europe at deeply discounted prices to those traded in the Amsterdam-Rotterdam-Antwerp hub of Northwest Europe.

The European Union Russian oil product ban came into effect on Feb. 5 this year, though LPG was not included. In any case, end-users in many parts of Europe have avoided Russian LPG cargoes. In the Russian Baltic, exports have increased from the LPG export terminal at Ust-Luga. Many shipments have discharged in Turkey, with smaller volumes reaching Jordan and as far as India.

Russian seaborne naphtha exports in 2022 were about 19 million mt. Out of this Europe – Northwest Europe, Scandinavia and European Mediterranean nations – imported around 9.4 million mt, with the remainder exported mainly to North Asia or the United States.

Of this total, naphtha analysts suggest that European naphtha end users, primarily petrochemical companies, would need to find around 5 million mt to cover for lost Russian naphtha exports.

Energy consultants Facts Global Energy project that Asian naphtha buyers are likely to increase purchases of Russian naphtha and forecast that, in order to balance the global naphtha market, will need to consume around 1.2 – 1.3 million mt/month of Russian naphtha in 2023. Such a move will probably back out Arabian Gulf and Indian naphtha as well as European arbitrage cargoes to Asia.

European buyers could, therefore, see more naphtha cargoes landing in Europe from Middle Eastern and west coast Indian loading terminals, as these lose their traditional Asian outlets to Russian naphtha in 2023.

The cargoes backed out from the arbitrage trade to Asia by Russian naphtha will, therefore, help to replace some of the 4.9 million mt of Russian naphtha normally absorbed by Europe, but it will not replace it all. Naphtha consultant NIS estimates that European naphtha consumers will still need to source around 800,000 metric tons of lost Russian volume in 2023.

## Risks and Opportunities:

The impact of the Russia-Ukraine war on Europe's LPG and naphtha supply presents both risks and opportunities for market players. The risks include supply disruptions and price volatility, which could have a significant impact on the petrochemical industry.

Russia is the largest producer of LPG in the world, while Ukraine is a major transit country for Russian LPG exports. In addition, Ukraine is a significant producer of naphtha, which is used as a feedstock for the production of petrochemicals.

The conflict between Russia and Ukraine has disrupted LPG and naphtha supplies to Europe in several ways. For example, the closure of the Kerch Strait, a key shipping lane between the

Black Sea and the Sea of Azov, has affected the transit of LPG and naphtha through the region. In addition, the conflict has led to increased tensions between Russia and Europe that resulted in sanctions, trade restrictions and supply disruptions. European countries have scrambled to look elsewhere for alternative sources of LPG and naphtha.

The International Price Cap Coalition (IPCC) introduced its price cap for crude oil and refined products effective February 5 2023. The cap will affect Russian naphtha exports, as organizations in IPCC member states will be banned from financing or shipping Russian naphtha cargoes if their price exceeds \$45/bbl.

The International Energy Agency (IEA) in its March Oil Market Report noted that naphtha from Russian Baltic and Black Sea ports was below the \$45/bbl price cap during March. They added that the naphtha cracks for Russian Baltic naphtha versus Urals deteriorated in March versus February by \$3/bbl and for April it slipped by a further \$7.50/bbl.

These figures suggest that as of mid-April 2023 IPCC based companies can finance or ship Russian naphtha.

The figures also illustrate anecdotal evidence some naphtha suppliers not subject to the ban on Russian naphtha imports are acquiring relatively cheaper Russian naphtha for their domestic consumption and selling their non-embargoed naphtha to markets in the IPCC.

## Conclusion:

The ongoing conflict between Russia and Ukraine has had a significant impact on Europe's energy markets, including the supply of LPG and naphtha. While the conflict presents risks and challenges for market players, it also presents opportunities for those who can adapt to the changing market conditions. As the situation continues to evolve, it is important for market players to stay informed and take proactive measures to manage their supply chains and mitigate risk.



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