

Russia's Achilles Heel: An EU Import Ban on Russian Liquefied Natural Gas Is Feasible and Necessary

Briefing by Sebastian Rötters (urgewald), April 2024

Trade in Russian liquefied natural gas: As if there were no war

Russia's brutal war against Ukraine has been going on for over two years. Tens of thousands of Ukrainians have been murdered and entire cities and regions have been razed to the ground. The EU has now adopted 13 sanctions packages and placed 1,706 people and 419 companies on the sanctions list.¹ The import of hard coal has been banned since August 11, 2022, and the import of Russian crude oil, at least by sea, has been prohibited since December 2022. The ban on refined petroleum products followed in February 2023, **but trade in Russian gas is still not subject to any sanctions (as of April 2024)**. As a result, Russia still earns many billions of euros from the export of fossil gas to the EU.

The Russian regime instrumentalized gas in particular to flank the bloody campaign against Ukraine. In 2021 and 2022, the Kremlin used the pipelines Yamal (via Poland), Bratstvo (via Ukraine) and Nordstream 1² as a weapon against the West. The unannounced curtailment of gas supplies triggered an energy crisis and skyrocketing prices in Europe. However, exports of liquefied natural gas (LNG) were never reduced; in fact, they continued to rise. **In the two years since 24 February 2022, LNG tankers have delivered 31.4 million tons (Mt) of Russian liquefied gas. By comparison, in the previous 24 months, the figure was just 23.3 Mt.**³ According to the data provider kpler, 23 vessels each carrying around 73,000 tons of Russian LNG from Yamal entered an EU port or transferred it to other tankers in EU waters in March 2024 alone.

Russia depends on access to EU ports and waters

In the meantime, gas consumption has fallen significantly, EU gas storage facilities are well stocked and prices have fallen back to pre-invasion levels. The balance of power in fossil gas trading has changed significantly. While the EU would not have to fear a serious gas shortage even without Russian LNG, the Russian state-owned company **Gazprom** has hardly found any alternative buyers for the pipeline gas that does not flow to the West anymore. Russia's most important LNG producer, **Novatek**, on the other hand, is still heavily dependent on export opportunities to Europe.

Sabetta (Yamal LNG), by far the most important LNG export terminal, located on the east coast of the Yamal Peninsula in the Russian Arctic, would face massive logistical problems if the EU were to ban the import and trade of Russian LNG. In the first quarter of 2024, over 90 percent of Yamal liquefied natural gas was delivered to the EU or transshipped there. If the easily reachable EU ports and waters were no longer available as destinations and transshipment points, the transportation routes for Russian gas from the Arctic would become significantly longer and more expensive. Furthermore, due to the very limited number of ships available, Russia would no longer be able to export at current volumes.

¹ <https://www.consilium.europa.eu/de/policies/sanctions/restrictive-measures-against-russia-over-ukraine/> (as at 16.04.2024)

² https://www.bundesnetzagentur.de/DE/Gasversorgung/a_Gasversorgung_2022/start.html
<https://www.bruegel.org/dataset/european-natural-gas-imports> Over the course of 2022, the supply volumes via Nord Stream 1 were first reduced from around 1,600 GWh/day to around 700 GWh/day (June) and then to 350 GWh/day. From September 2022, gas no longer flowed via Nord Stream 1. Nord Stream 1 and 2 were blown up on September 22, 2022. Supplies via the Yamal pipeline were already significantly reduced in October 2021 and stopped completely in May 2022. Bratstvo still supplies gas, but only in small quantities.

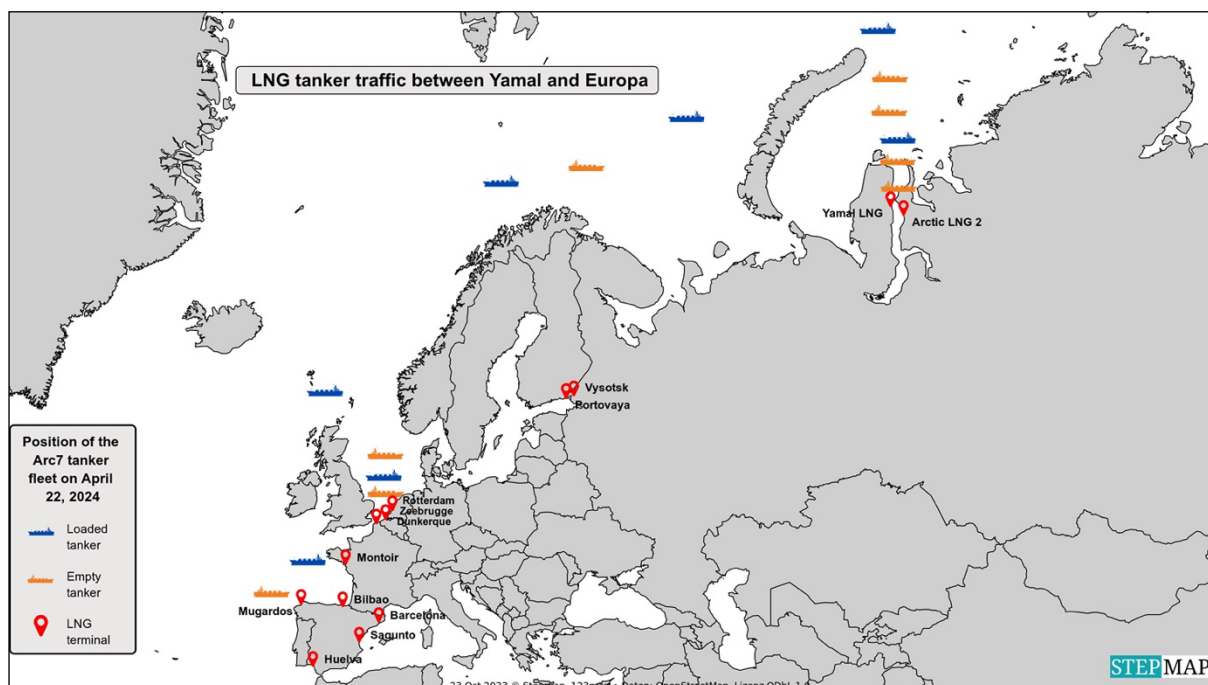
³ Urgewald calculations based on information from the ship data provider kpler.



The Arc7 LNG tankers – Russia's Achilles heel

15 Arc7-class icebreaker LNG tankers were built specifically for the export of LNG from Yamal. Ships of this class can handle ice thicknesses of up to 1.7 meters. Only with the help of these special ships is it possible to operate the terminal, which commenced operations at the end of 2017, all year round. From December to June, Sabetta is serviced by these tankers exclusively. Although the terminal serves other LNG vessels between July and November, the lion's share of the liquefied gas is transported by the Arc7 tankers even during this period, as Urgewald's analysis of the kpler data shows. The *Christophe de Margerie*, named after the former head of the oil and gas group Total, is the only tanker which belongs to the Russian shipping company Sovcomflot. The other 14 Arc7 ships are owned by Dynagas Ltd (Greece), Seapeak LLC (Marshall Islands) and MOL - Mitsui/COSCO (Japan/China).

While Russia was able to build up a shadow fleet of oil tankers to a limited extent to circumvent the oil sanctions, the EU or the USA could easily prevent this with the Arc7 LNG tankers through sanctions. The reason is that only the 15 Arc7 tankers built for Yamal are currently in operation around the world. Without ships of this type, neither the existing Sabetta export terminal nor the major Arctic LNG 2 expansion project can be operated economically.



Since the USA imposed sanctions on Arctic LNG 2, it has become clear that Russia is vulnerable at this point. Several foreign companies that were involved in Arctic LNG 2 alongside Novatek have been forced to declare force majeure. **Whether Novatek will succeed in putting Arctic LNG 2 into operation will primarily depend on the number of ships available.** Originally, 21 new Arc7 tankers were to be built for the project. However, due to the sanctions, Novatek currently does not even have access to the three ships *Zhores Alferov*, *Pyotr Kapitsa* and *Lev Landau* that have been completed to date.⁴ Like the 15 Arc7 tankers in operation, these were built in South Korea. Although further vessels are now under construction at the Russian Zvezda shipyard, it is currently unclear whether and when they can be completed. As some important partners have withdrawn due to the sanctions, major delays are to be expected at the very least.⁵

⁴ <https://www.upstreamonline.com/lng/gas-output-too-low-to-sustain-new-lng-production-at-russian-project/2-1-1619098>
 Insert several footnotes with newer articles and more background information!

⁵ <https://www.offshore-energy.biz/shi-suspends-construction-of-blocks-for-zvezdas-arctic-lng-carriers/>

Several companies, including Samsung Heavy Industries (South Korea), GTT (France), MAN (Germany) and Wärtsilä (Finland) have terminated their cooperation with Zvezda or the supply of important components.



Novatek: Another one of the Kremlin's geopolitical weapons

While Gazprom primarily sells pipeline gas, PAO Novatek is the leading company on the Russian LNG market. The company, whose CEO and largest shareholder Leonid Mikhelson is already on several sanctions lists, mainly produces gas from production areas on the Yamal Peninsula in the Russian Arctic. This is shipped via the Sabetta LNG port, which was commissioned at the end of 2017 and has a nominal annual capacity of 17.35 million tons of LNG. Thanks to the smooth shuttle operation of the 15 Arc7 tankers to date, this nominal capacity has even been exceeded by up to 20 percent in recent years.⁶

Together with the Arctic LNG 2 terminal under construction just over 75 kilometers away, **Yamal LNG is Putin's flagship liquefied natural gas project.** Novatek is pursuing the massive expansion of infrastructure in this Arctic region in order to make Russia a global player in the LNG business. With the help of these projects in particular, Russia aims to triple its LNG exports by 2030. Some Western companies, especially TotalEnergies, have also been at the forefront of both Yamal LNG and Arctic LNG 2.

For the Russian regime, however, the liquefied natural gas business is not only important as a source of income.⁷ **Similar to the oil and nuclear sectors, the export of LNG also holds geopolitical importance. Russia is trying to create dependencies that can be used politically.** It is unlikely that the Russian regime will once again succeed in weaponizing LNG as effectively as it did with pipeline gas between summer 2021 and summer 2022. However, Putin has proven that he is prepared to use energy supplies indiscriminately as a means of pressure and blackmail at any time. **The USA has noticeably forced Novatek onto the defensive with the sanctions against Arctic LNG 2.** Without the necessary Arc7 tankers, Novatek will have to change its expansion plans and possibly even scale them back considerably. The EU must step up its game here and consistently sanction existing LNG exports in order to deprive the Kremlin of important revenues and snatch this geopolitical weapon out of its hands.⁸

The EU and Russian LNG: An embargo long overdue

The EU receives the vast majority of Russian LNG supplies from Yamal. Urgewald's analysis of the kpler data shows: The liquefied gas has mainly landed in Belgium, France and Spain, and to a lesser extent in the Netherlands.⁹ Furthermore, smaller volumes reach the EU via the Russian Baltic Sea ports of Vysotsk and Portovaya. Novatek also supplies the Belgian port of Zeebrugge via Vysotsk, while Gazprom also exports LNG to Greece via Portovaya. Compared to Yamal, however, these exports are hardly significant. **A good 80 percent of the gas that is shipped from Yamal to the EU is also consumed in the EU. The remaining 20 percent is transshipped in EU waters or at the port of Zeebrugge and exported onwards – primarily to China. Through this cooperation, the EU is directly supporting Russia's LNG export business to Asia and therefore undermining its own sanctions.**

Despite the aforementioned LNG deliveries, Europe is no longer dependent on Russian gas as it was at the beginning of 2022. In 2023, Russian LNG accounted for 6.1% of the EU's total imports. Experts predict that supply on the global LNG market will increase in 2025, which is why significant bottlenecks are not expected. It can never be ruled out that other crises (see: Middle East!) will intensify and have an impact on the gas supply. However, based on the experience of 2022, Russia cannot be seen as a reliable partner in such a case.

⁶ <http://yamallng.ru/en/press/news/43995/>

⁷ Updated information on Russia's revenue can be found here: <https://www.russiafossiltracker.com>

⁸ <https://www.reuters.com/business/energy/russias-novatek-may-scale-back-arctic-lng-2-focus-murmansk-sources-say-2024-04-04/>

<https://www.upstreamonline.com/production/russia-slaps-higher-taxes-on-oil-and-gas-concerns/2-1-1352870>

⁹ The main ports of entry are Zeebrugge (Belgium), Montoir and Dunkerque (France), Bilbao, Mugarodos, Huelva, Sagunto, Barcelona and Cartagena (Spain) as well as Rotterdam (Netherlands).

At the moment, the EU has the upper hand when it comes to sanctions and should use this as soon as possible. This would also involve challenges on the EU side, but it would have the advantage of eliminating Russian gas dependence more quickly.

We call on the EU and its member states to take the following measures:

- An immediate EU-wide import ban on Russian LNG.
- A transshipment ban for Russian LNG in EU ports and waters.
- Sanctions for ships calling at Russian LNG export terminals in order to deprive Russia of access to the existing Arc7 tanker fleet.
- Effective steps to prevent technology exports that Russia needs to build the Arctic LNG 2 export terminal and other Arc7 tankers.

Background information

Russia's LNG export infrastructure

Terminal name	Capacity (mtpa)	Owner	Commissioned in	Primary export destinations
Sakhalin 2 (Eastern Russia)	10.77	Sakhalin Energy Gazprom 50 % + 1 share (RU) Novatek 27.5 % - 1 share (RU) Mitsui 12.5 % (JP) Mitsubishi 10 % (JP)	2009	Japan, China, South Korea
Yamal LNG (Russian Arctic)	17.35	OAo Yamal LNG Novatek 50.1 % (RU) CNPC 20 % (CN) TotalEnergies 20 % (F) Silk Road Fund 9.9 % (CN)	2017	Belgium, France, Spain, China (directly or via EU)
Vysotsk (Baltic Sea)	0.66	Cryogas Novatek 51 % (RU) Gazprombank 49 % (RU)	2019	Greece, Belgium, Turkey, 2024 also Spain
Portovaya (Baltic Sea)	1.50	JV Portovaya Gazprom 50 % (RU) Gazprombank 50 % (RU) ¹⁰	2022	Greece, Turkey, China, 2024 also Spain
Arctic LNG 2 (Russian Arctic)	19.75	Novatek 60 % (RU) TotalEnergies 10 % (F) CNOOC 10 % (CN) CNPC 10 % (CN) Japan Arctic LNG 10 % (JP) ¹¹	Under construction, planned for 2024, currently unclear	Originally Europe and Asia, currently unclear
Murmansk LNG (Northwest Russia, ice-free harbor)	20.34	Novatek (RU)	Planned, date unknown	unclear

¹⁰ <https://www.upstreamonline.com/lng/gazprom-hands-bank-50-stake-in-russian-lng-export-plant/2-1-1577893> Gazprom recently sold 50% of Gazprombank, which is only 30% owned by Gazprom. According to media reports, the largest shareholder is the Gazfond pension fund.

¹¹ <https://www.reuters.com/business/energy/foreign-shareholders-suspend-participation-russias-arctic-lng-2-project-2023-12-25/> TotalEnergies, CNOOC, CNPC and Japan Arctic LNG have declared force majeure due to the US sanctions.

Russian LNG exports in Q1/2024

Export port	Quantity	Share
Russia total	8,406,339 t	100 %
Yamal LNG	5,132,043 t	61.0 %
Sakhalin 2	2,628,012 t	31.3 %
Portovaya	425,534 t	5.1 %
Vysotsk	220,750 t	2.6 %

LNG exports Yamal in Q1/2024

Import country	Quantity	Share
Total	5,132,043 t	100 %
France	1,690,692 t	32.9 %
Belgium	1,469,924 t	28.6 %
<i>Of which re-exported to non-EU countries</i>	<i>433,576 t</i>	<i>8.4 %</i>
Spain	1,102,537 t	21.5 %
Netherlands	227,579 t	4.4 %
Ship-to-ship transfer in EU waters with destination outside the EU	425,236 t	5.1 %

All LNG exports from Yamal in March 2024

(deliveries that went to the EU or were transhipped there are marked in yellow)

Date	Tanker	Export port	Port of import	Final destination
01.03.2024	Boris Davydov	Yamal	Zeebrugge (BE)	
02.03.2024	Georgiy Brusilov	Yamal	Huelva (ESP)	
03.03.2024	Georgiy Ushakov	Yamal	Mugardos (ESP)	
03.03.2024	Nikolay Urvantsev	Yamal	Murmansk (RU)	STS ¹² → Jieyang (CN)
04.03.2024	Fedor Litke	Yamal	Dunkerque (F)	
04.03.2024	Rudolf Samoylovich	Yamal	Zeebrugge (BE)	
04.03.2024	Boris Vilkitsky	Yamal	Zeebrugge (BE)	
07.03.2024	Nikolay Zubov	Yamal	Zeebrugge (BE)	
09.03.2024	Vladimir Voronin	Yamal	Montoir (F)	
09.03.2024	Vladimir Vice	Yamal	Zeebrugge (BE)	
14.03.2024	Vladimir Rusanov	Yamal	Bilbao (ESP)	
14.03.2024	Eduard Toll	Yamal	Dunkerque (F)	
14.03.2024	Nikolay Urvantsev	Yamal	Murmansk (RU)	STS → East Asia
15.03.2024	Nikolay Yevgenov	Yamal	Rotterdam (NL)	
16.03.2024	Christophe de Margerie	Yamal	Zeebrugge (BE)	
18.03.2024	Yakov Gakkel	Yamal	Bilbao (ESP)	
20.03.2024	Rudolf Samoylovich	Yamal	Zeebrugge (BE)	
21.03.2024	Boris Davydov	Yamal	Bilbao (ESP)	
23.03.2024	Fedor Litke	Yamal	Zeebrugge (BE)	
23.03.2024	Boris Vilkitsky	Yamal	Dunkerque (F)	
24.03.2024	Georgiy Ushakov	Yamal	Zeebrugge (BE)	STS → Mugardos (ESP)
25.03.2024	Georgiy Brusilov	Yamal	Zeebrugge (BE)	
26.03.2024	Vladimir Voronin	Yamal	Zeebrugge (BE)	STS → Pudong (CN)
27.03.2024	Nikolay Zubov	Yamal	Montoir (FR)	STS → Asia
31.03.2024	Nikolay Urvantsev	Yamal	Montoir (FR)	

¹² STS = Ship-To-Ship Transfer. These cargoes were transferred to non-Arc7 tankers.



Existing Arc7 fleet for Yamal

Name Arc7-Tanker	IMO number	Owner	Year of construction
Christophe De Margerie	9737187	Sovcomflot (RU)	2016
Boris Vilkitsky	9768368	Dynagas Ltd (GR)	2017
Eduard Toll	9750696	Seapeak LLC (MH)	2017
Fedor Litke	9768370	Dynagas Ltd (GR)	2017
Boris Davydov	9768394	Dynagas Ltd (GR)	2018
Georgiy Brusilov	9768382	Dynagas Ltd (GR)	2018
Rudolf Samoylovich	9750713	Seapeak LLC (MH)	2018
Vladimir Rusanov	9750701	MOL (Mitsui) (JP) - COSCO (CN)	2018
Vladimir Vice	9750658	MOL (Mitsui) (JP) - COSCO (CN)	2018
Georgiy Ushakov	9750749	Seapeak LLC (MH)	2019
Nikolay Urvantsev	9750660	MOL (Mitsui) (JP) - COSCO (CN)	2019
Nikolay Yevgenov	9750725	Seapeak LLC (MH)	2019
Nikolay Zubov	9768526	Dynagas Ltd (GR)	2019
Vladimir Voronin	9750737	Seapeak LLC (MH)	2019
Yakov Gakkel	9750672	Seapeak LLC (MH)	2019

Planned Arc7 fleet for Arctic LNG2

Name Arc7-Tanker	IMO number	Planned owner	Shipyard	Status
Zhores Alferov	9918028	Sovcomflot (RU) currently: Hanwha Ocean (KR) ¹³	Hanwha	(Delivery unclear)
Pyotr Kapitsa	9918004	Sovcomflot (RU) currently: Hanwha Ocean (KR)	Hanwha	(Delivery unclear)
Lev Landau	9918016	Sovcomflot (RU) currently: Hanwha Ocean (KR)	Hanwha	(Delivery unclear)
Nikolay Basov	9918042	Mitsui OSK Lines (MOL) (JP)	Hanwha	(not completed)
Ilya Mechnikov	9918030	Mitsui OSK Lines (MOL) (JP)	Hanwha	(not completed)
Nikolay Semenov	9918054	Mitsui OSK Lines (MOL) (JP)	Hanwha	(not completed)
Alexey Kosygin	9904546	Sovcomflot/Novatek (RU) ¹⁴	Zvezda	(not completed)
Pyotr Stolypin	9904675	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Sergei Witte	9904687	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Viktor Chernomyrdin	9904699	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Konstantin Posyet	9904704	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Zvezda 046	9918779	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Zvezda 047	9918781	Sovcomflot/Novatek (RU)	Zvezda	(not completed)
Zvezda 048	9918793	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 049	9918808	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 050	9918810	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 051	9918822	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 052	9918834	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 053	9918846	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 054	9918858	Sovcomflot/Novatek (RU)	Zvezda	(ordered)
Zvezda 055	9918860	Sovcomflot/Novatek (RU)	Zvezda	(ordered)

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¹³ The Arc7 tankers "Zhores Alferov", "Pyotr Kapitsa" and "Lev Landau" were originally ordered by Sovcomflot. Delivery of the ships is currently proving difficult due to sanctions. <https://gcaptain.com/hanwha-ocean-transfers-gas-carrier-for-russias-arctic-lng-2-to-uae-entity/>

¹⁴ <https://splash247.com/sovcomflot-and-novatek-seal-order-for-10-lng-carriers-at-zvezda-shipyard/>
https://en.wikipedia.org/wiki/Zvezda_shipyard#cite_note-44