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Testimony

Restricting Rogue-State Revenue: Strengthening Energy Sanctions on Russia, Iran, and Venezuela

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Sanctions generally prove most effective before they are applied. Once applied, the immediate effectiveness is usually mitigated by various factors. These include a capacity to circumvent or minimize the repercussions of sanctions through domestically available tools, as well as external influences such as economic fluctuations, geopolitical conditions, and even environmental factors. Hence, even though sanctions are usually applied with the goal to promptly curb an adverse behavior of a state, actual realization of their objectives requires a more protracted timeline. In addition, the absence of broad, multilateral application and/or enforcement can further undermine the effectiveness of sanctions.

For petro-states such as Russia, Venezuela, or Iran, sanctions targeting their energy exports have traditionally been employed with the objective of depriving these nations of revenues, thereby constraining their military capabilities and eroding the popularity of their governments. However, the effectiveness of U.S. sanctions applied on all three countries has not always yielded satisfactory outcomes.

In particular, in the case of Russia, sanctions on energy flows imposed after the 2022 invasion of Ukraine have produced mixed results. This testimony seeks to analyze the impact of energy sanctions, elucidate the factors contributing to their unsatisfactory outcomes, and propose measures to enhance their effectiveness.

The Prelude: 2014 -2022

When evaluating the impact of the sanctions imposed on Russia by the U.S. following the 2022 invasion of Ukraine, it is crucial to consider the "pre-existing conditions." Specifically, these were the sanctions already in place as a result of the Russian invasion of Ukraine in 2014 and the annexation of Crimea. These included:

1. Sanctions prohibiting transactions, provision of financing, or any other dealings in new debt with a maturity exceeding 90 days for major Russian oil and gas companies such as Rosneft, Gazprom Neft, Transneft, and OAO Novatek, as well as any majority-owned subsidiaries of these companies.
2. Prohibition on the provision of assistance, including technology, goods, or services, for deep-water, Arctic offshore, as well as shale exploration and production projects capable of oil production. This restriction applied to Gazprom, Gazprom Neft, Lukoil, Surgutneftegas, and Rosneft, as well as majority-owned subsidiaries of these companies.
3. In 2017, the Countering America's Adversaries Through Sanctions Act (CAATSA) imposed sanctions on companies involved in or investing in Russian oil and gas pipelines. Initially excluding the Nord Stream 2 (NS2) project since its contracts were signed prior to 2017, an exemption to CAATSA was only applied to NS2 in 2020, subjecting the pipeline to U.S. sanctions.

Notably, the sanctions outlined above, have been limited. They primarily targeted specific elements of company activity rather than imposing comprehensive measures on entire entities. Importantly, these sanctions often grandfathered prior activities, focusing only on regulating future interactions rather than curbing Russia's ability to profit from existing

resources. Consequently, major U.S. oilfield and equipment companies were able to maintain their presence in Russia, actively contributing to oil and gas production.

Furthermore, it is worth noting that while the European Union (EU) adopted sanctions similar to those of the U.S., their implementation varied. A outstanding distinction lied in the approach to existing contracts, where EU policies allowed for the grandfathering of agreements signed before the imposition of sanctions. Consequently, while American Exxon withdrew from its operations with Rosneft, European companies such as ENI, BP, and Statoil maintained partnerships with that company. Shell continued its involvement in the Sakhalin-2 projects with Gazprom. Numerous European companies also sustained engagements in natural gas ventures, participating in initiatives like Nord Stream 1, financing Nord Stream 2, and contributing to Novatek's Yamal LNG project. Similarly, Japanese companies, continued their participation in Russian projects, Sakhalin-I and Sakhalin-II.

Also, Russia has, to some extent, achieved success in pivoting toward China, though only after the latter saw its bargaining position over Russia strengthen due to 2014 sanctions. This shift exemplified by China's agreement to proceed with a natural gas pipeline from Russia, the Power of Siberia, facilitating the circumvention of Western sanctions. Chinese financing has played a pivotal role in supporting Russian Arctic natural gas development, contributing to the success of the Yamal LNG project.

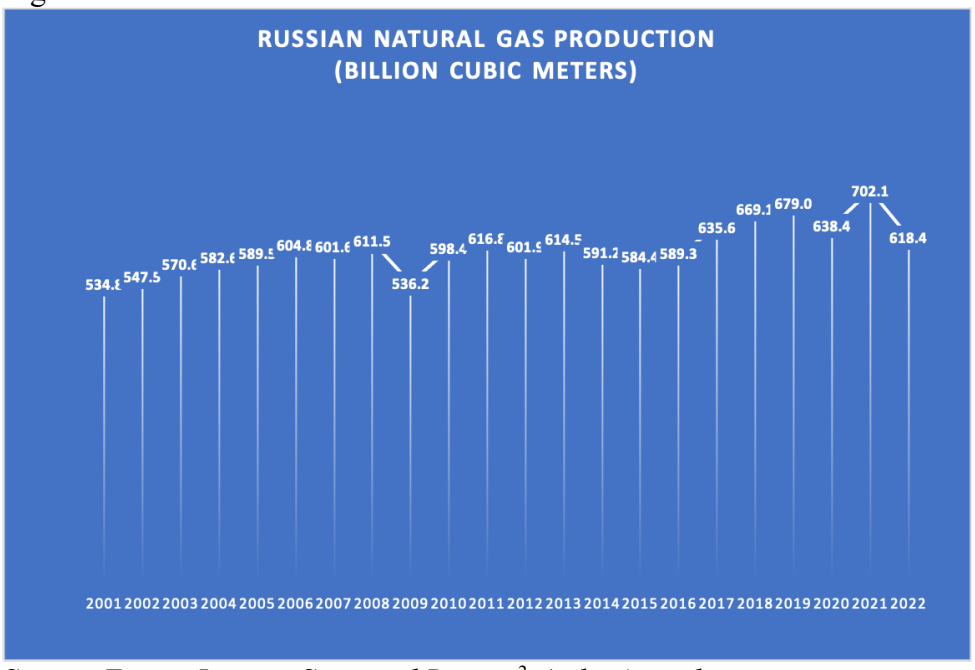
The forward-looking nature of sanctions, coupled with their uneven application and the ability to circumvent financing limitations through Chinese entities, have all been reasons behind limited impact of 2014-2017 sanctions on the performance of the Russian oil and gas sector. Both oil and gas production demonstrated an upward trajectory until the onset of the COVID-19 pandemic in 2020 (Figures 1 & 2). Exports of natural gas also saw an increase, especially to European markets as sanctions did not target Russian gas sales rather their future production (Figure 3). Even the United States received a shipment of Russian LNG in 2018, when Gaselys, a French LNG tanker, delivered LNG to Boston, with Russian gas molecules blended into the shipment.[1]

At the same time, the decline in crude oil exports post-2017 cannot be solely attributed to sanctions (4); rather, it was closely tied to global economic challenges and fluctuations in oil prices. Significantly, Russia has aligned itself with OPEC producers in the OPEC+ alliance, playing a pivotal role in assisting the group in regaining control over oil markets after the surge in U.S. shale oil production had significantly eroded OPEC's influence.[2]

[1] Anna Mikulska, Delivery Of Russian LNG Heats Up Discussion About U.S. Energy Dominance And Sanctions. Forbes, Feb.6,2018. https://www.forbes.com/sites/thebakersinstitute/2018/02/06/delivery-of-russian-lng-heats-up-discussion-about-u-s-energy-dominance-sanctions/?sh=3e5a8c297464

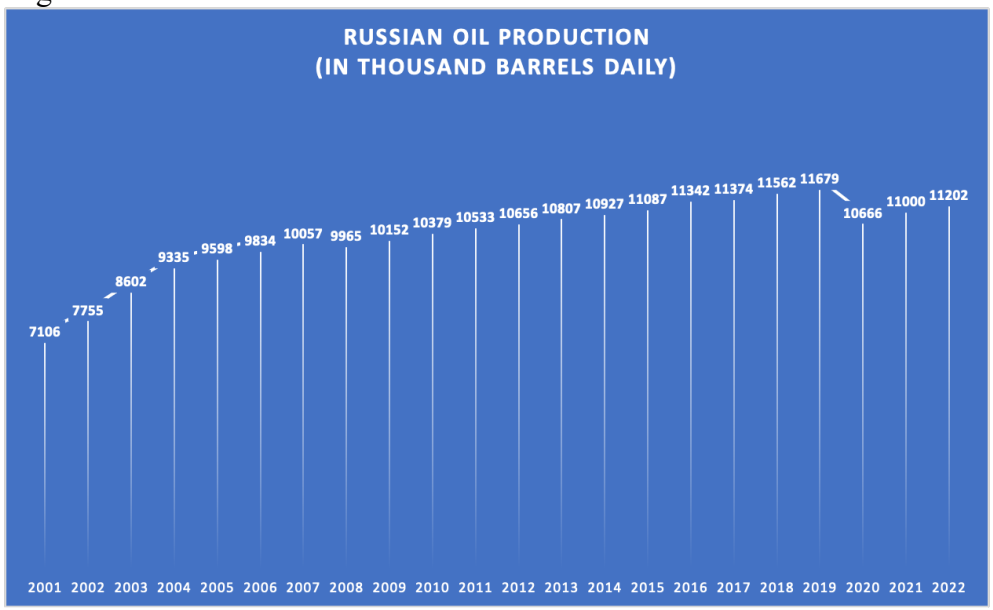
[2] Coates Ulrichsen, Kristian, Mark Finley, and Jim Krane. *The OPEC+ Phenomenon of Saudi-Russian Cooperation and Implications for US-Saudi Relations*. Research paper no. 10.18.22. Rice University's Baker Institute for Public Policy, Houston, Texas. https://doi.org/10.25613/0B0F-J592

Figure 1.



Source: Energy Institute Statistical Review,[3] *Author's analysis.*

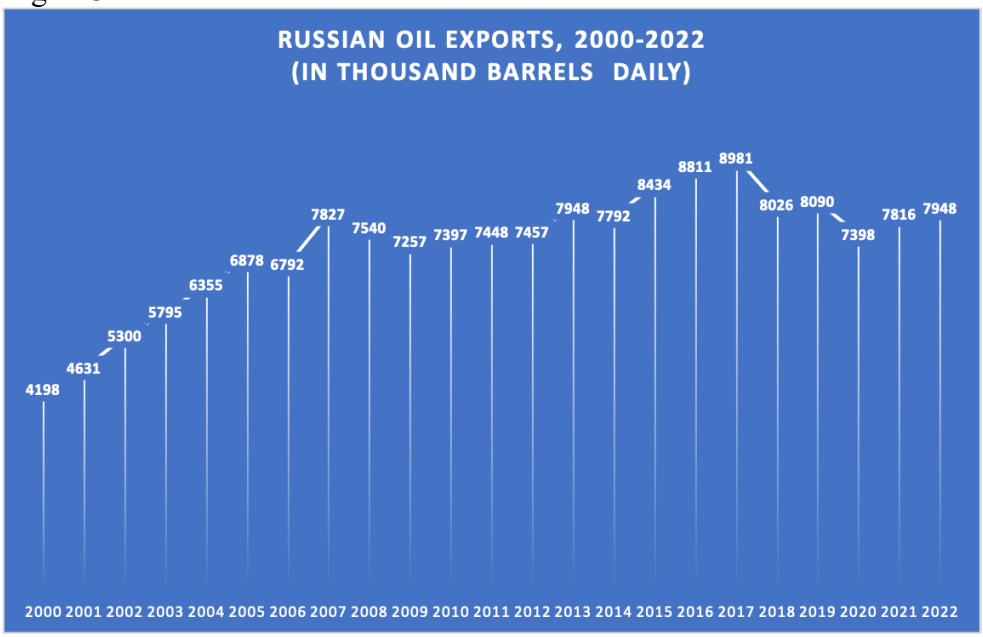
Figure 2.



Source: Energy Institute Statistical Review, [4] *Author's analysis.*

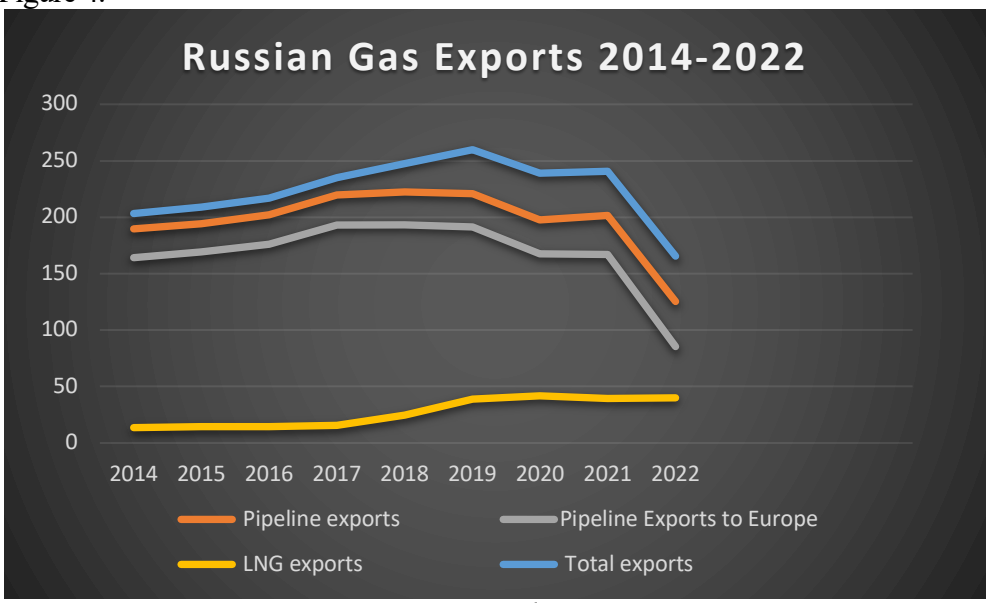
[3] Energy Institute, Statistical Review of World Energy 2023, https://www.energyinst.org/statistical-review
[4] Ibid.

Figure 3.



Source: Energy Institute Statistical Review, [5] Author's analysis.

Figure 4.



Source: Energy Institute Statistical Review, [6] Author's analysis.

In response to the limited sanctions imposed by the U.S. and its allies after 2014, Russia has proactively taken steps to fortify its resilience against potential broader measures. This strategic approach encompasses the development of a more self-reliant financial system and a concerted

[5] Ibid.
[6] Ibid.

effort to bolster domestic production and self-sufficiency whenever feasible. The devaluation of the ruble has played a significant role in enhancing competitiveness and aiding budget management, as foreign currency earnings from oil and gas have translated into greater value in the domestic context.

Furthermore, Russia has actively sought partnerships to mitigate the impact of potential isolation from Western countries. Collaborations with China and participation in the OPEC+ alliance have been key components of this strategy, contributing to Russia's ability to navigate the challenges posed by sanctions.

Over time, both the country and its citizens have adapted to the reality of sanctions. The Russian government has shifted its focus to address domestic concerns, emphasizing issues such as employment, essential services, and supplies. This adaptive approach reflects a multifaceted strategy aimed at not only withstanding existing sanctions but also preparing for more potential challenges from the Western world.

Energy Sanctions post-2022 Invasion on Ukraine

The impact of U.S. sanctions on Russia following its second invasion of Ukraine has been relatively subdued. This includes energy sanctions. While the U.S. quickly banned any oil and gas imports from Russia, the volumes of those imports have been minimal and, hence, could not have much impact on Russian economy. At the same time, U.S. allies, especially Europe - Russia's primary market for oil and gas export- have undertaken more restrained actions.[7]

As delineated in detail in our report "Wielding the Energy Weapon: Differences between Oil and Natural Gas," the reliance of our European allies on Russian energy imports has led to two significant adaptations in the context of sanctions.[8]

The first major adjustment revolved around concerns about the potential impact of limiting oil exports from Russia on global oil prices and, consequently, on economic growth.[9] In response, the European Union (EU) has implemented an embargo on the majority (though not all) of Russian crude purchases. Additionally, the Group of Seven (G7) has instituted a cap on crude oil

[7] Before the invasion, approximately 50 percent of Russia's total exports of crude and refined products were directed to Europe. Additionally, Europe accounted for about three-quarters of Russia's natural gas exports, encompassing 83 percent of exports via pipelines. For consideration of Europe's dependence on Russian gas see Gabriel Collins, Kenneth B. Medlock III, Anna Mikulska, and Steven R. Miles, research paper: "Strategic Response Options if Russia Cuts Gas Supplies to Europe," Rice University's Baker Institute for Public Policy, Houston, TX, February 11, 2022, https://www.bakerinstitute.org/research/strategic-response-options-if-russia-cuts-gas-supplies-europe.

[8] Finley, Mark and Anna Mikulska. 2023. *Wielding the Energy Weapon: Differences Between Oil and Natural Gas*. Baker Institute Report no. 06.26.23. Rice University's Baker Institute for Public Policy, Houston, Texas. https://doi.org/10.25613/G9P2-3F78.

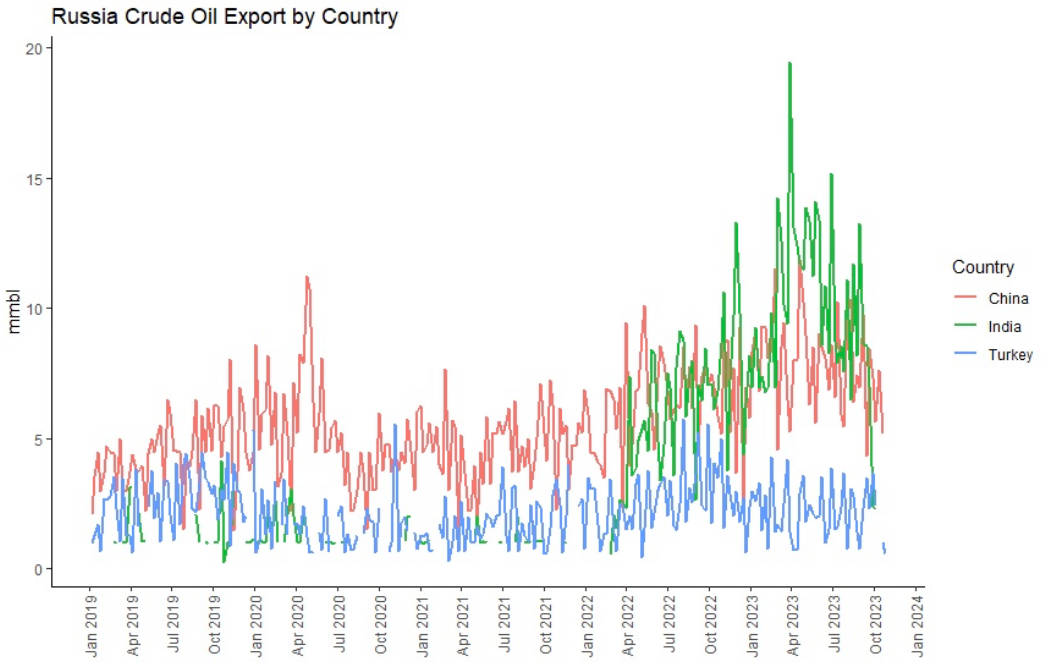
[9] For additional discussion of the political sensitivity of gasoline prices (especially in the U.S.), see Mark Finley and Anna Mikulska, research paper: "Energy Transition, Energy Security, and Affordable Fuel: How the Energy Crisis Can Help Policymakers 'Thread the Needle'," Rice University's Baker Institute for Public Policy, Houston, TX, August 5, 2022, https://doi.org/10.25613/2E9H-JX43.

sales, setting it at $60 per barrel. Furthermore, caps have been imposed on refined product prices, with “high-value” products capped at $100 and "low-value" ones at $45.

The rationale behind this complicated system is to ensure the maintenance of crude volumes globally while concurrently denying Russia the revenues that would help finance Russian war in Ukraine. It is noteworthy that these sanctions differ significantly from those imposed on Iran in the Joint Comprehensive Plan of Action (JCPOA), where an outright ban on oil sales is coupled with financial sanctions. In contrast, the measures taken in response to the Russian aggression involve a ban on their own purchases, complemented by price caps for any Russian oil sold elsewhere, particularly if such transactions involve G7/EU services such as shipping and insurance.

The implementation of this system has followed already existing trend among companies as already expectations of sanctions on Russian oil triggered substantial adjustment in global crude and refined product flows. Countries such as Turkey, China, and India (Figure 5) were able to capitalize on the situation by securing substantial discounts.

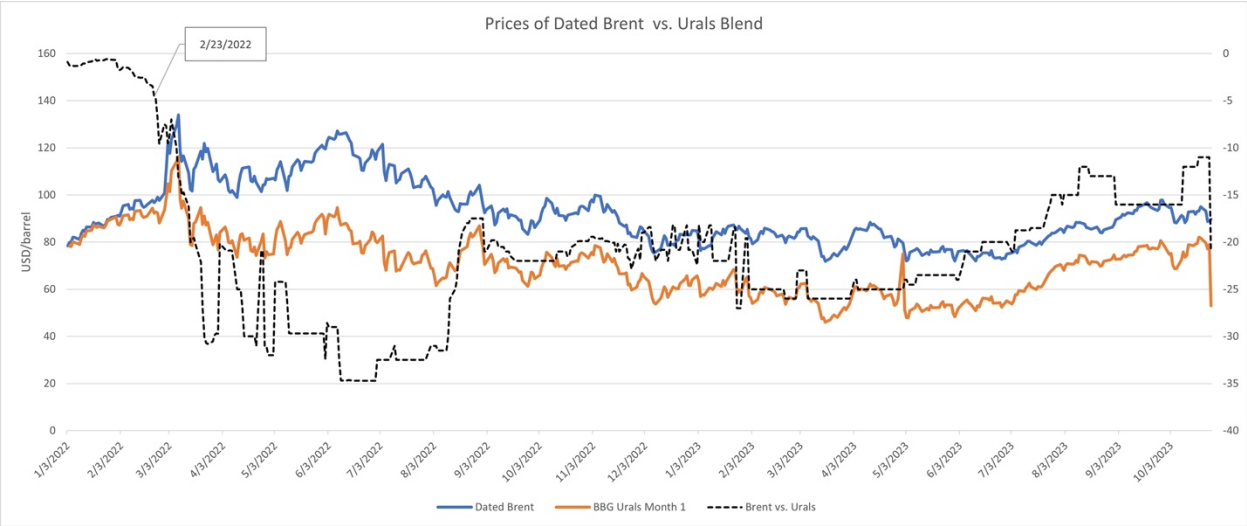
Figure 5. Russia Crude Oil Exports to China, India, and Turkey



Source: Bloomberg, Author’s analysis.

Still, Russian oil revenues in 2022 remained relatively stable, with any discounts offset by the elevated prices of oil. The decline in Russian oil revenues this year is primarily attributed to lower oil prices rather than the imposed restrictions. These lower prices (Figure 6) have also yielded the $60 cap insufficient at times.

Figure 6. Prices of Dated Brent vs. Urals Blend



Source: Bloomberg, Author's analysis

But it has been the lack of robust enforcement mechanisms that has emerged as most significant challenge in implementing the sanctions, as both European and third-country companies have been able to circumvent the imposed restrictions. This does not only involve maritime oil shipments. For example, a recent acknowledgment from Germany, for instance, revealed that the Kazakh oil it imports is likely mixed with oil from Russia, as Kazakhstan sends the oil via the Druzhba pipeline.

Complicating matters further, Russia has developed an entire shadow fleet of aged tankers designed to operate around the price cap, often sailing without insurance. Techniques such as "flag hopping," hidden fees, and disabling identification systems have been employed to evade the price cap, adding a layer of complexity to the enforcement challenge.

Only recently, the U.S. and the U.K. have taken steps to enhance price cap enforcement. The U.S. Treasury imposed sanctions on eight vessels that breached the G7 price cap rules, signaling a more assertive stance. Addressing these enforcement gaps is crucial for the effectiveness of sanctions, as their success hinges on the ability to prevent circumvention and ensure compliance across the board.

The second major adjustment in response to the EU dependence on Russian energy has been lack of sanctions on Russian natural gas flows to the EU as the latter lacks sufficient alternatives. Strikingly, it has been Russia that has chosen to progressively limit its pipeline gas deliveries to

Europe. This move has been visibly aimed at exploiting the vulnerability of the EU's dependence on Russian gas, create disruptions and weaken European resolve to support Ukraine.

Russia's Response

The initial concerns about Russia's potential reaction to the oil embargo in Europe and the G7 oil price cap, particularly in terms of limiting its crude exports, have not materialized. Despite earlier threats from Russia, both oil output and exports of crude and oil products have remained relatively steady (Figures 2&3). This stability is notable, with the exception of Russia's participation in OPEC production cuts and a short-term ban on the export of refined products due to domestic supply shortages.

This lack of a strong reaction by Russia can be attributed to the global structure of the oil market and Russia's own economic and geopolitical priorities. A unilateral cut in oil supplies by Russia would not only impact Europe and the U.S. but also countries such as China and India, which have not taken unequivocally hostile positions toward Russia in the aftermath of the Ukraine invasion.

Given that income from oil and gas production and exports is crucial for the Russian government, Russia has also managed to bolster its revenues by making adjustments to taxation. While taxes on exports were lowered, the government increased taxation on production, as detailed in Table 1. This strategic approach has allowed Russia to navigate the complex economic and geopolitical landscape while sustaining the country's revenue streams.

Table 1. Russian Oil and Gas Revenues 2018-2023 (in bn of rubles)

Oil and gas revenues,	**2018**	**2019**	**2020**	**2021**	**2022**	**2023 (Jan-Nov)**
Total	**9,017.8**	**7,924.3**	**5,235.2**	**9,056.5**	**11,586.2**	**8,171.9**
Mineral Extraction Tax	6,009.8	5,971.7	3,819.7	7,110.9	10,643.7	**8,495.4**
Oil	5,232.3	5,175.5	3,198.3	6,295.7	8,391.5	**6,986.8**
Gas	630.6	627.0	482.2	577.8	1,872.1	**1,101.3**
Gas condensate	147.0	169.3	139.1	237.4	380.1	**407.5**
Export duty	3,007.9	2,276.0	1,131.5	2,224.6	2,506.4	**863.4**
Oil	1,550.0	1,115.5	436.0	707.8	607.2	**254.9**
Gas	809.2	695.7	439.1	1,125.4	1,630.1	**495.5**
Petroleum products	648.7	464.9	256.4	391.4	269.1	**113.2**

Data Source: Russia's Ministry of Finance

Concurrently, Russia has expanded its liquefied natural gas (LNG) exports. In fact, Russian LNG exports to Europe have doubled between January 2021 and January 2023. Novatek, an "independent" Russian oil and gas company, has played a prominent role in this surge in LNG

shipments. However, it's crucial to recognize that the term "independent" is not a fitting description for the company, as no energy company in Russia can be considered independent of state policy, particularly under conditions of war.

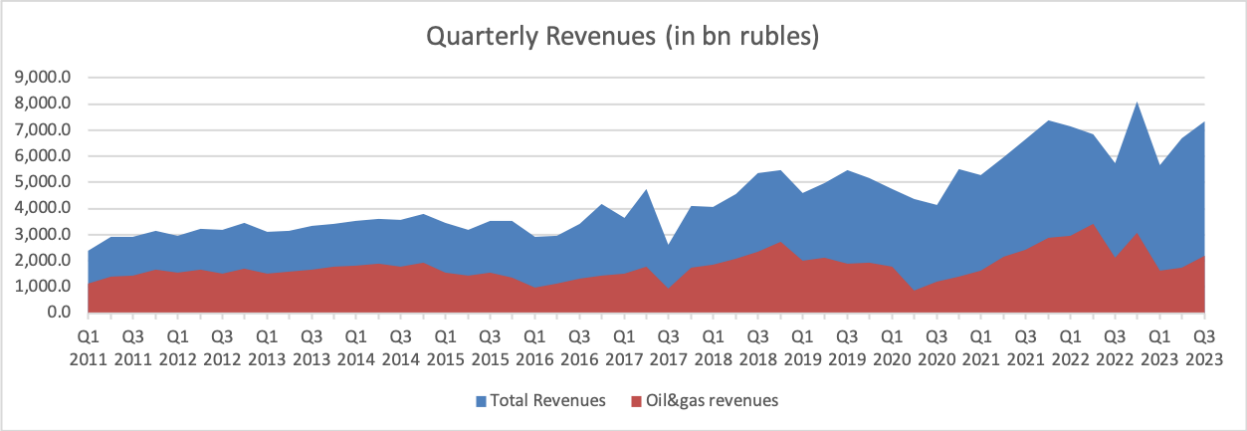
As highlighted in our 2020 report, Novatek's strategic position in Russian LNG development has been carefully orchestrated and planned by the Russian state.[10] The Russian Energy Strategy to 2035, approved by Putin in 2020, positions LNG as a key driver of growth for Russian natural gas. The strategy envisions LNG contributing to approximately 70% of the growth in Russian gas exports, with LNG volumes reaching between 80-140 million tonnes per annum (mtpa) by 2035. The agility of a private company like Novatek has been advantageous in navigating the increasingly liquid and global LNG market. However, it's important to note that, as history has shown with the case of Yukos, any private company in Russia can be swiftly transformed into a state-owned entity based on political considerations and directives.

Implications

The energy sanctions imposed on Russia following its 2022 aggression have experienced limited success, influenced by several factors. Russia's ability to adapt and prepare for increased self-sufficiency, as well as a greater reliance on non-Western actors, particularly China, has played an important, mitigating role. Furthermore, the creative use of taxation and monetary policy, such as ruble devaluation, has contributed to sustaining the Russian state's financial resources.

Even so, the signs of difficulties to come are on the horizon. To begin, the ratio of oil and gas revenues in the total revenues of the country has decreased (Figure 7), which is particularly visible if Russian revenues are expressed in US dollars (Figure 8). Russia Ministry of Finance also projects that these lower levels will endure for next several years oscillating around 30-35%.

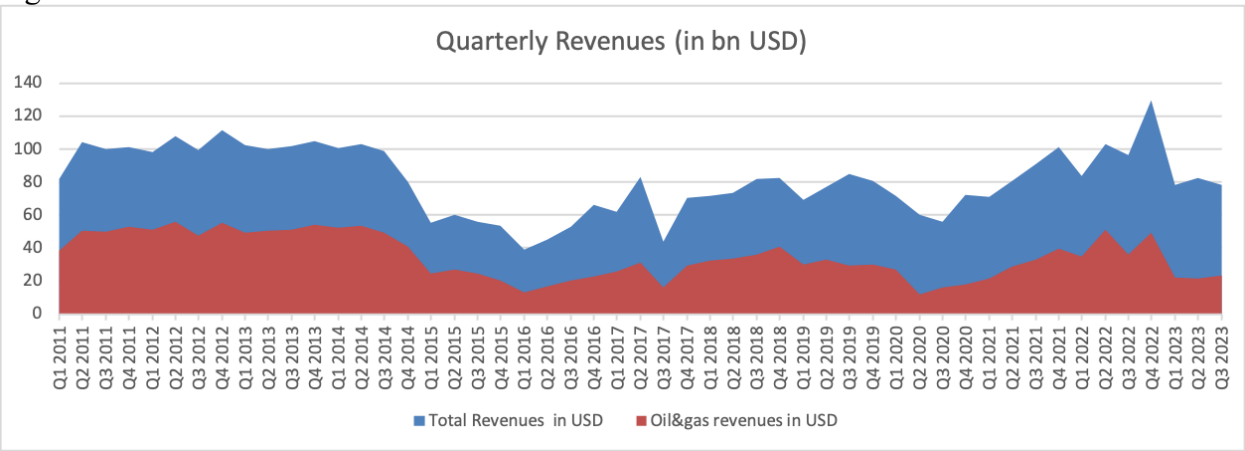
Figure 7.



Data Source: Russia's Ministry of Finance, Author's analysis.

[10] Mikulska, Anna and Pawel Jakubowski. 2020. *The Future of Russian Gas: A Tale of Two Cities.* Issue brief no. 06.29.20. Rice University's Baker Institute for Public Policy, Houston, Texas. https://www.bakerinstitute.org/research/future-russian-gas-tale-two-cities

Figure 8.



Data: Russia's Ministry of Finance, Federal Reserve Bank of St. Louis; Author's analysis.

Additionally, the devaluation of the ruble introduces a significant dimension to the assessment of Russia's financial landscape. Currency devaluation can only go so far as a mitigating factor domestically. Coupled with high inflation and interest rates its impacts on individual households can prove disastrous.

The financial strategy of relying on adjusted tax income to sustain revenues has also negative implications for Russia's energy sector. While this approach may help finance state coffers, the heavy taxation will limit the ability of Russian energy companies to invest and grow. Also, the lack of cutting-edge technology and the phenomenon of "brain drain," with skilled professionals emigrating to seek better opportunities, is likely to impact the efficiency, quality, and innovation of Russia's energy sector in the long term.

Reliance on China, Venezuela, and Iran for energy cooperation may pose additional challenges. While energy exports to China provide revenue, Russia risks becoming a junior partner in this relationship. Furthermore, learning evasion techniques from countries like Venezuela and Iran may have diminishing returns, especially as Russia becomes a competitor in the increasingly crowded market of sanctioned energy sources.

Conclusions

The success of tough sanctions and Transatlantic unity relies not just on the imposition of measures but equally on robust and strict enforcement.[11] The lack of enforcement not only diminishes the intended impact of the sanctions on reducing Russian capability to support their

[11] See, for example: The International Group on Russian Sanctions, *Using Energy Sanctions to Shorten the War*, https://fsi9-prod.s3.us-west-1.amazonaws.com/s3fs-public/2023-09/working_paper_14_-_using-energy-sanctions_09-19-23_update.pdf

ongoing aggression against Ukraine. It also poses a risk to the long-term efficacy of broader counter threat financing and sanctions regimes globally. Inconsistent or lax enforcement can create loopholes that our adversaries, particularly authoritarian ones, might exploit. It weakens the credibility of the sanctions and undermines the unified front presented by the Transatlantic community. In contrast, ensuring the stringent enforcement of sanctions not only strengthens their immediate impact but also sends a clear message to authoritarian adversaries that the international community is committed to upholding the principles of sanctions as a diplomatic tool.

Additionally, limitations or exclusions in energy sanctions can present challenges and unintended consequences. Exclusions may inadvertently provide avenues for the targeted nation to sustain its economic activities. I have already highlighted the case of Russian LNG. But Russia is also a leading nuclear energy exporter, not only in terms of providing nuclear fuel but also as a key source of nuclear technology and financing for nuclear projects. Several Russian-funded projects are currently underway, including in NATO countries like Hungary and Turkey.

This contrast with the United States, which currently has no active nuclear projects abroad, (although some MOUs are in a quite advanced stage). Russia's established presence and involvement in supplying technology and financing for nuclear projects have given it a distinct advantage in shaping the global nuclear energy landscape. This proactive engagement in nuclear energy exports aligns with Russia’s broader geopolitical strategy and economic interests. Thus, the U.S. and its allies need to be mindful of these developments and consider their implications for energy security, geopolitical influence, and strategic competition in the nuclear energy domain. Addressing this asymmetry may involve not only technological advancements but also strategic collaboration and policy measures to ensure a more balanced and secure global nuclear energy landscape.

The ongoing war in Ukraine is likely to prompt Russia to adjust its strategy in the field of nuclear power. As geopolitical dynamics evolve and new limitations and opportunities emerge, Russia's approach to nuclear exports may undergo changes to adapt to the shifting priorities. Notably, nuclear exports have proven to be one of the most stable elements of Russian energy trade. Unlike other sectors, no sanctions have been imposed on the trade in nuclear fuel, including to the U.S. Moreover, while Sweden and Finland have decided to forgo Russian investment in nuclear projects, countries like Hungary and Turkey continue to proceed with the construction of Russian nuclear power plants according to schedule.

Meanwhile, the geopolitical value of energy resources stemming from a market-driven, democratic system, such as the United States, cannot be overstated. The ability to replace Russian oil and gas with molecules from the U.S. has not only provided a strategic alternative for countries, especially in Europe, but it also transformed the geopolitical equation. The presence of privately owned U.S. oil and gas resources has played a pivotal role in making energy markets more liquid and fungible. This is particularly evident in the liquefied natural gas (LNG) market, where increased flexibility has limited the geopolitical influence of countries like Russia,

Venezuela, or Iran. The diversification of energy sources enhances global and domestic energy security, providing a buffer against disruptions caused by geopolitical events.[12]

In fact, as my colleagues and I have pointed out in several papers published sine 2018,[13] geoeconomic tools, which leverage economic instruments to achieve geopolitical objectives, can indeed play a crucial role in enhancing resilience and reducing dependency on specific energy suppliers. Indeed, the proactive application of energy geoeconomics could potentially make sanctions more effective or even obviate the need for them in some instances.

For example, had European countries had diversified their gas sources away from Russia, they would have been more resilient to cuts in Russian gas flows. This increased resilience could empower Europe to apply gas sanctions on Russia, if necessary, rather than being in a vulnerable position of scrambling for alternative supplies and facing exorbitant energy prices.[14]

When it comes to current sanctions on Russia, besides ensuring strict enforcement, managing expectations is crucial, as impact often requires time to materialize. Countries may adapt, evade, or adjust to the new circumstances introduced by sanctions, and their effectiveness may be influenced by various geopolitical factors. Lack of universal application can additionally complicate the intended results. For example, Russian alliance with China, OPEC, as well as collaboration on sanction evasion with Iran or Venezuela can prove challenging.

However, acknowledging these challenges does not imply that sanctions are entirely ineffective. They can still exert pressure, constrain resources, and influence the behavior of the targeted nation over time. Sanctions often work in conjunction with broader diplomatic and geopolitical strategies, and their effectiveness may be more evident in the long term.

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[12] Kenneth B. Medlock III. testimony before the U.S. House of Representatives Committee on Foreign Affairs Subcommittee on Terrorism, Nonproliferation, and Trade at its hearing on the "Geopolitics of U.S. Oil and Gas Competitiveness" May 22, 2018. https://docs.house.gov/meetings/FA/FA18/20180522/108347/HHRG-115-FA18-Wstate-MedlockIIIK-20180522.pdf

[13] Collins, Gabriel, Anna Mikulska, and Steven Miles. 2022. *Winning the Long War in Ukraine Requires Gas Geoeconomics.* Research paper no. 08.25.22. Rice University's Baker Institute for Public Policy, Houston, Texas. https://www.bakerinstitute.org/research/winning-long-war-ukraine-requires-gas-geoeconomics-0 As well as: Collins, Gabriel and Anna Mikulska. 2021. *Gas Geoeconomics: A Strategy to Harden European Partners Against Russian Energy Coercion*. Policy brief: Recommendations for the New Administration. 02.12.21. Rice University's Baker Institute for Public Policy, Houston, Texas. https://www.bakerinstitute.org/research/gas-geoeconomics-strategy-harden-european-partners-against-russian-energy-coercion; and Gabriel Collins and Anna Mikulska, *Gas Geoeconomics in Europe: Using Strategic Investments to Promote Market Liberalization, Counterbalance Russian Revanchism, and Enhance European Energy Security*, Rice University's Baker Institute for Public Policy, Houston, Texas, June 1, 2018. https://www.bakerinstitute.org/research/gas-geoeconomics-europe

[14] Collins, Gabriel and Steven R. Miles. 2023. *Why Is Europe Not Replacing Russian Pipeline Gas With Long-term LNG Contracts?* Report no. 09.13.23. Rice University's Baker Institute for Public Policy, Houston, Texas. https://doi.org/10.25613/3FRC-FA56.