

IMPACT OF SANCTIONS ON RUSSIA'S ENERGY SECTOR

Bud Coote

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Cover photo credits A worker checks a valve of an oil pipe at the Lukoil company owned Imilorskoye oil field outside the West Siberian city of Kogalym, Russia. 25 January 2016. REUTERS/Sergei Karpukhin.

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TABLE OF CONTENTS

Executive Summary	1
Introduction	2
Sectoral Sanctions on Energy	2
Russia's Approach to Dealing with Sanctions	3
Impact on Russia's Energy Sector	4
Major Oilfield Services Players in Russia	6
Uneven Application of Sanctions	7
Russia's Impressive Growth in Oil Production	8
Energy Success Fuels Geopolitical Momentum	8
Implications	10
About the Author	12

EXECUTIVE SUMMARY

When the United States and European Union (EU) imposed sanctions on Russia beginning in March 2014, world oil prices averaged \$104 per barrel. The sanctions targeted future rather than current oil production to avoid a global economic downturn caused by a decline in Russian oil production. The sanctions did not target natural gas development and production at all to avoid an energy crisis in Europe triggered by cuts in Russian natural gas availability. Despite the sanctions, Russian oil production has continued to climb robustly and Russian gas supplies to Europe have remained plentiful. In 2016 Russia's oil production growth was its highest in eleven years and its gas exports to Europe hit record highs in 2016 and 2017.

The sanctions, designed and imposed by the United States and EU, targeted long-term oil projects, in particular those that require the financial, management, and technical skills of international oil companies: offshore oil exploration and development in the north, deepwater oil development, and projects to exploit shale oil deposits. However, while sanctions were intended to delay and hamper Russia's ability to develop such projects, it can be argued that sanctions did Moscow a favor by delaying projects that are too expensive to undertake in the oil price environment that has persisted since late 2014. Average oil prices plunged below \$50 per barrel in January 2015 and dropped to less than \$30 per barrel in January 2016, before leveling out to between \$40 and \$65 over the course of 2017.¹

Indeed, lower oil prices have hurt Russian energy sector revenues much more than sanctions have. However, that is not to say that sanctions have not had an impact. Sanctions have dramatically reduced the equity value of Russian energy firms, made borrowing for energy projects more difficult, and sharply reduced the value of Russia's currency. Despite these impacts, Russian oil production has increased every year from 2008 through 2016, and may set another record high in 2017 despite Moscow's commitment to the Organization of

the Petroleum Exporting Countries (OPEC) to reduce production.²

New US sanctions legislated in August 2017 also are unlikely to significantly affect Russia's energy sector. The new sanctions differ from earlier ones by addressing the possibility of sanctioning foreign investments in and loans to Russian pipelines, including gas pipelines. However, the US State Department subsequently issued guidance that sanctions apply only to energy pipeline projects initiated on or after August 2, 2017, the date of the act. This seems to exempt Russia's major pipeline projects, including the controversial Nord Stream 2 gas pipeline.³

Russia has also been able to reverse some of the downward momentum in its energy prospects since the initial imposition of sanctions, particularly through projects that could provide Moscow with both political and commercial benefit. Moscow gained some political support and status by engaging with OPEC and agreeing to take measures in support of oil prices, and is also working with Ankara on the TurkStream gas pipeline and partnering with Germany and a number of Western oil and gas companies on the Nord Stream 2 gas pipeline project. Russia's largest oil producer, the state-owned company Rosneft, has also been able to participate in Venezuela's oil operations and invest in the Kurdish Region of Iraq.

The political momentum gained from these overtures has contributed to President Vladimir Putin's domestic public support. As the main driver behind the energy initiatives, Putin has used energy integrally with other economic and political tools to successfully navigate his way through sanctions, despite leading an economy that was already heading into recession when sanctions were first imposed and a country that has since suffered a sharp drop in real wages and living standards.

¹ US Energy Information Administration, "Europe Brent Spot Price," November 17, 2017, <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=rbrte&f=D>.

² BP, *BP Statistical Review of World Energy June 2016*, <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-full-report.pdf>.

³ US Department of State, "CAATSA/CRIIEA Section 232 Public Guidance," October 31, 2017, <https://www.state.gov/e/enr/275195.htm>.

INTRODUCTION

This report addresses the impact of US and European Union (EU) sanctions on Russia's energy sector, Moscow's strategy and actions to deal with energy-related sanctions, and some of the geopolitical and other implications of Russia's ability to cope with these sanctions. The analysis highlights how Moscow has managed to successfully pursue its energy goals, despite the broader negative impact of sanctions on other areas of the Russian economy.

Sanctions directed against goods and services for oil production and those restricting new debt for Russian energy companies are only part of the US and EU sanctions regimes. These were applied simultaneously with sanctions on debt and equity on select Russian state-owned enterprises and specially designated individuals and other entities. This paper focuses on the energy aspects of the sanctions.

SECTORAL SANCTIONS ON ENERGY

Under US sanctions, US individuals, companies, and other entities, including companies' foreign branches and persons in the United States, are prohibited from dealing with new debt of longer than ninety days' maturity for sanctioned Russian energy companies. These companies include Russia's state-owned and largest oil company, Rosneft; Russia's fourth-largest oil producer, Gazprom Neft; Russian government-owned oil pipeline company Transneft; Russia's largest independent natural gas producer, OAO Novatek; and subsidiaries owned 50 percent or more by those companies.

US individuals, companies, and other entities, including companies' foreign branches and persons in the United States, are also prohibited from providing, exporting, or re-exporting goods, services, or technology that support exploration or production for offshore operations in waters deeper than five hundred feet, arctic offshore projects, or shale projects that could potentially produce oil in Russia. These restrictions apply to the Russian companies Gazprom, Gazprom Neft, Lukoil, Surgutneftegaz, Rosneft, and subsidiaries owned 50 percent or more by those companies.⁴

New US sanctions on Russia now being implemented by the administration were imposed in August 2017, including sanctions on the energy sector. The sanctions were largely motivated by Congress's intent to put the sanctions in legislation so that President Donald Trump cannot lift them without congressional consent and also by a consensus in Congress that Russia interfered with the US election. Besides tightening earlier sanctions, the new legislation includes sanctions against entities supporting or investing in Russia's oil and gas pipeline networks, which reflects US opposition to the Nord Stream 2 gas pipeline from Russia through the Baltic Sea to Germany. Germany denounced the imposition of sanctions against this project when prior versions in Congress did not call for cooperation with allies. Some key provisions on pipelines are largely discretionary, which could vastly dilute their application and effect. The legislation related to pipelines such as Nord Stream 2 contains clauses that sanctions are to be imposed unless "the President determines it is not in the national interest of the United States to do so." The new legislation also provides for mandatory sanctions on foreign, non-US entities investing in some Russian crude oil projects and on foreign financial institutions conducting significant financial transactions with persons placed on the list of Specially Designated Nationals.⁵

US State Department guidance that foreign investment or loans related to pipeline projects involving export pipelines that begin in Russia will not be sanctioned if the projects and agreements were initiated before the August 2017 legislation make it unlikely that Nord Stream 2 and similar pipeline projects will be sanctioned unless the White House or Congress takes contrary action.⁶ Prior to August 2017, contracts to buy the pipe for Nord Stream 2 were signed, a deal for a pipe-laying vessel was concluded, and agreements for loans from five European companies were signed. Activities such as agreements for new loans and investments that take place after the effective date of the new sanctions act would be subject to sanctions, as would the provision of goods and services for new pipeline projects.⁷

RUSSIA'S APPROACH TO DEALING WITH SANCTIONS

Since 2014, President Vladimir Putin has taken a multifaceted approach toward sanctions that has mitigated their impact, especially in the energy sector. Putin's approach has its origins in his experiences dating back to his first term as prime minister, which began in 1998 when oil prices dipped to about \$10 per barrel. During this period of low oil prices he witnessed and absorbed the value of sharply cutting imports of foreign goods and relying heavily on ruble transactions to reduce costs in the domestic economy, especially in the purchase of equipment and services for oil and gas development.

Putin also learned the economic pain of Russia's past neglect to build up strong international financial reserves during periods of high energy prices, which he did in subsequent years when oil prices recovered and soared above \$100 per barrel. Other major elements of Putin's approach include continued efforts to boost natural gas exports to Europe, an increased emphasis on exporting gas to China and elsewhere in Asia, and continued efforts to limit competition in the European gas market from other former Soviet producers, particularly Azerbaijan, Kazakhstan, and Turkmenistan.

As Putin took over the premiership of Russia in August 1998, the Russian economy defaulted that same month during a severe slump in oil prices, underscoring to Putin the value of building up financial reserves when times are good. During 1998 and 1999, Russia's international reserves were only about \$12 billion. Putting the lesson into practice, Russia built up its reserves to \$100 billion by 2004 and to a peak of nearly \$600 billion in 2008. As oil prices decreased in recent years, the value of these financial reserves fell from about \$500 billion in early 2014 by about \$140 billion by July 2015. However, the high starting point meant that Russia still had about \$360 billion, about thirty times the amount of foreign currency reserves held by the central bank in 1998 and 1999 when Putin took over the premiership.⁸

Russia's large buildup in financial reserves in the years leading up to 2014 enabled Moscow to limit the impact of sanctions by buttressing the financial stability of its banks and providing funds to help offset

the large debts of state-owned companies. Russia also used its financial reserves to support investment, including in the energy sector. State-owned Rosneft has particularly benefitted from these funds, as it had incurred considerable debt by buying assets formerly owned by Yukos and other entities in previous years.

At the same time, Moscow allowed the ruble to drop sharply to discourage imports and lower the costs of domestic supplies purchased by Russian companies. This has worked particularly well in the energy sector, where domestic suppliers of equipment and services have been able to replace imported goods and services at lower costs. Many foreign suppliers of goods and services are also required to accept rubles as payment in the energy sector, which lowers costs for Russian companies. Moscow has further supported its energy sector activities by lowering taxes on oil production operations and oil export duties in recent years.⁹

Russia is continuing its efforts to increase natural gas sales to Europe, including by using tactics that divide Europe.

Russia has been able to rebuild its international financial reserves since 2015 as higher global prices for energy and other extractive industry exports brought an influx of dollars, combined with increases in interest rates to curb inflation and help stabilize the ruble. Moscow also instituted measures to prompt Russian companies to sell some of their dollars abroad and buy rubles at home.¹⁰ According to Russia's central bank, reserves have subsequently risen to \$431 billion in November 2017.¹¹

Russia is continuing its efforts to increase natural gas sales to Europe and increase its market access, including by using tactics that divide Europe. Europe, including Turkey, is Russia's largest gas market by

4 Stewart and Stewart, *Ukraine-/Russia-Related Sanctions Update and Overview: US and EU Reaffirm Sanctions*, August 8, 2016, <http://www.stewartlaw.com/article/ViewArticle/1078>.

5 For more details on the new sanctions, see Daniel Fried and Brian O'Toole, *The New Sanctions Law, What It Does and How to Make It Work*, Atlantic Council, September 2017, http://www.atlanticcouncil.org/images/The_New_Russia_Sanctions_Law_web_0929.pdf.

6 US Department of State, "CAATSA/CRIIEA Section 232 Public Guidance."

7 Offshore Technology, "Nord Stream 2," December 7, 2017, <https://www.offshore-technology.com/projects/nord-stream-2-pipeline/>.

8 The Central Bank of the Russian Federation, "International Reserves of the Russian Federation (End of Period)," December 2017, https://www.cbr.ru/eng/hd_base/mrrf/mrrf_m/. (Includes foreign currency reserves and gold.)

9 Felix K. Chang, "Effectiveness of Economic Sanctions on Russia's Economy," Foreign Policy Research Institute, June 1, 2017, <https://www.fpri.org/2017/06/effectiveness-economic-sanctions-russias-economy/>.

10 Tim Worstall, "Russia's Dangerous Game with Forcing Exporters to Sell Dollars for Rubles," *Forbes*, December 23, 2014, <https://www.forbes.com/sites/timworstall/2014/12/23/russias-dangerous-game-with-forcing-exporters-to-sell-dollars-for-rubles/#7f413e0f5884>.

11 The Central Bank of the Russian Federation, "International Reserves of the Russian Federation (End of Period)," December 2017.

far, buying about 180 billion cubic meters (bcm) of Russian gas in 2016 and even more in 2017. Germany and Turkey are Gazprom's largest customers. The Nord Stream 2 natural gas pipeline is one such divisive project, which appeals to Germany and some other northern European countries, but is strongly opposed by Eastern and Central European countries that see it as a threat to EU gas supply diversity and security. These Eastern and Central European countries are also concerned that the project will enable Russia's state-owned gas export monopoly Gazprom to control use of European pipelines needed to distribute gas from Nord Stream 2, such as the OPAL and EUGAL Pipelines. In addition, Nord Stream 2 will substantially reduce the volume of Russian gas transiting through Ukraine, depriving Ukraine of a key source of revenue.

Russia and Germany still face some relatively new potential obstacles to Nord Stream 2 unrelated to sanctions. In November 2017 the European Commission proposed to amend its gas directive to the EU Third Energy Package to apply common EU gas rules to import pipelines. The proposal needs approval by the European Parliament and Council before it becomes law.¹² A new Danish law may block the pipeline's access to Danish waters and German political turmoil could also have an impact.

Russia appears to have managed to negotiate its way through a major EU antitrust case against Gazprom with little damage. The settlement is not final, but major issues involving investigation of monopolistic practices by Gazprom seem headed toward favorable outcomes for the company, compared with punishments for monopoly behavior in other business areas by non-Russian actors. This is despite huge disparities in gas prices Gazprom charged to European customers as recently as 2013 and large costs to buyers incurred by Russian contract clauses forbidding the onward sale of unneeded Russian gas to other customers. Ukraine took Gazprom to court for similar tactics and won a verdict in 2017.¹³

While Europe is the largest market for Russian gas, Russia's pivot to Asian markets as European demand stagnates or grows more slowly gained more focus

after US and EU sanctions were imposed. However, the effort to cultivate Asian customers has thus far produced mixed results at best for Moscow. Certainly, Beijing's lack of enthusiasm to follow through on a \$400 billion natural gas deal signed with Moscow in March 2014 is a major, if predictable, disappointment. China has shown that it is more interested in a diverse set of supplies, including its deal for 65 bcm of pipeline gas from Turkmenistan and purchases of growing volumes of liquefied natural gas (LNG), some from the United States. China has invested in Russia's Yamal LNG terminal and has started constructing a domestic gas pipeline that when completed will receive modest volumes of gas from Russia's Power of Siberia Pipeline. Shipments are due to start at about 5 bcm per year and grow to 38 bcm over the thirty-year contract, but no pricing agreement has been announced.¹⁴

A continuing element of Moscow's post-sanctions strategy is to limit the access of gas producers in the former Soviet Union to European customers. This strategy has followed a pattern of "block, co-opt, and compete" in response to export projects pursued by other states, particularly Azerbaijan and Central Asian states. Blocking a project is Moscow's first option, co-opting is second, and competing is last. Currently, Moscow's priorities include blocking Turkmen gas exports to Europe either across the Caspian Sea to join with Azerbaijani gas in the Southern Gas Corridor or through Russia and Ukraine as previously delivered to Europe. Competing with the Southern Gas Corridor by constructing the TurkStream and Nord Stream 2 Pipelines is another high priority.¹⁵

IMPACT ON RUSSIA'S ENERGY SECTOR

Overall, sanctions have significantly impacted Russia's economy, standard of living, investment capabilities, and even its options to pursue further political or military ambitions in Ukraine. However, the Russian energy sector—the target of some of those sanctions—is doing well. Financially, Russia suffered the most economic pain in the first year of sanctions, as companies suddenly faced debts denominated

¹² European Commission, "Energy Union: Commission Takes Steps to Extend Common EU Gas Rules to Import Pipelines," press release, November 8, 2017, http://europa.eu/rapid/press-release_IP-17-4401_en.htm.

¹³ Irina Filatova, "Ukraine Wins Battle with Gazprom in Contract Clash," *Deutsche Welle*, June 2, 2017, <http://www.dw.com/en/ukraine-wins-battle-with-gazprom-in-contract-clash/a-39101679>.

¹⁴ Olesya Astakhova and Chen Aizhu, "Exclusive: Russia Likely to Scale Down China Gas Supply Plans," *Reuters*, January 15, 2017, <https://www.reuters.com/article/us-russia-china-gas-exclusive/exclusive-russia-likely-to-scale-down-china-gas-supply-plans-idUSKCN0UTLIG>; Reuters Staff, "China to Complete Russia Oil, Gas Pipeline Sections by End-2018: Vice Governor," *Reuters*, May 12, 2017, <https://www.reuters.com/article/us-china-silkroad-russia-pipelines/china-to-complete-russia-oil-gas-pipeline-sections-by-end-2018-vice-governor-idUSKBN18819I>.

¹⁵ See Bud Coote, *The Caspian Sea and Southern Gas Corridor: A View from Russia*, Atlantic Council, April 2017, http://www.atlanticcouncil.org/images/publications/Caspian_Sea_and_Southern_Gas_Corridor_web_0427.pdf.

in dollars and euros and saw their access to foreign borrowing reduced. At the same time, commodity prices were plunging, creating huge financial losses and a cash crunch, and contracting the economy.¹⁶ However, energy and commodity prices began to stabilize and Russia's central bank began cutting back its defense of the ruble in 2015, reducing the drain on financial reserves. The Russian government gradually resumed some investment, which benefited energy and other commodity development. This was reinforced by growing foreign investment, particularly by European companies.¹⁷ German investment almost disappeared after sanctions were imposed in 2014, but in 2016 Germany was second only to China in investment in Russia, contributing more than \$2 billion.¹⁸

[T]he Russian energy sector—the target of some of those sanctions—is doing well.

The dynamics of Russian oil production operations also work favorably. Both the value of the ruble and tax rates, including the mineral extraction tax and the export duty, fluctuate in concert with oil prices, helping to keep the economics of oil investment and production relatively stable. According to analysis by the *Financial Times*, the return on investment to Russian companies for production by standard individual vertical wells in West Siberia is similar to or higher than the return before the 2014-15 price plunge.¹⁹

The cost of energy production in Russia is also typically fairly low. This is especially the case with the value of the ruble falling far below the pre-sanctions level. Companies operating in Russia are able to sell oil in dollars and pay for drilling and other production operations with rubles, allowing them to reduce costs and increase investment to boost output.

¹⁶ Chang, "Effectiveness of Economic Sanctions on Russia's Economy."

¹⁷ *Ibid.*

¹⁸ Ruth Bender, "German Firms Place New Bets on Russia," *Wall Street Journal*, December 8, 2016, <https://www.wsj.com/articles/german-firms-place-new-bets-on-russia-1481193003?mg=prod/accounts-wsj>.

¹⁹ Ronald Smith, "Don't Bet on Russia Capping Oil Output," *Financial Times*, October 3, 2016, <https://www.ft.com/content/8741742a-8643-11e6-8897-2359a58ac7a5>.

²⁰ US Energy Information Administration, "Low Oil Prices Have Affected Russian Petroleum Companies and Government Revenues," October 20, 2016, <https://www.eia.gov/todayinenergy/detail.php?id=28432>.

²¹ Deloitte, *Oilfield Services Market, Conditions and Trends 2016*, April 2017, <https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/energy-resources/oilfield-services-market-conditions-and-trends-2016-april.pdf>.

²² *Ibid.*

In addition, sanctions that restrict non-Russian companies from participating in projects or operations involving oil development in the Arctic, deepwater development, and shale oil development have led to greater focus on lower-cost conventional operations. This is further reinforced by the lower level of oil prices, which generally reduces investment in exploration of future, high-cost resources, and drives relatively higher investment in production. In fact, high-cost resource development projects, which are generally the ones sanctioned, might well be unprofitable in the current oil price environment. To some extent, sanctions are probably saving Russia money it is better off not spending at this time.

Overall, Russian investment in oil production is now robust. After a dip in 2015, investment rose in 2016 and higher oil prices and a 9 percent decrease in oil export duties in late 2016 helped to spur investment in 2017. According to the US Energy Information Administration, many Russian oil companies increased investment from the first half of 2015 to the first half of 2016, in terms of rubles. State-owned Rosneft, Russia's largest oil producer, boosted its investment spending by 33 percent, most of which is in Russia.²⁰

- A recent study of Russia's oilfield services market conducted by Deloitte found that Russian companies set a record in 2016 for footage drilled, buoyed by expectations of rising future wellhead prices. Production drilling footage in 2016 surpassed 2015 by 12 percent, even though average oil prices declined by 16 percent in 2016. Exploration drilling footage rose by 20 percent and geophysical services increased by 6 percent in 2016, further underscoring Russian optimism. Deloitte's survey of Russian executives also found that 55 percent agreed that investment in the Russian oil and gas sector would not decline for the next five years.²¹ Once again, Rosneft led the increase. Rosneft increased its production drilling footage by 36 percent in 2016 compared with production drilling in 2015 and its exploration drilling rose by 35 percent compared with 2015.²²



German Chancellor Angela Merkel greets Russian President Vladimir Putin at the beginning of the G20 summit in Hamburg, Germany, July 7, 2017. Russia's energy ties with Europe help support Russian oil and gas production and exports. REUTERS/Bernd Von Jutrczenka/POOL

- Regionally, Russia has managed to triple its drilling footage in East Siberia in recent years despite sanctions.²³

MAJOR OILFIELD SERVICES PLAYERS IN RUSSIA

Oilfield services and equipment companies have played a major role in providing the technology and operations needed to enable Russia to boost oil production. Russia accounts for about 17 percent of the world's oilfield market, about \$25 billion annually. Among the key players are two major international companies, Schlumberger and Halliburton, world leaders in advanced oilfield techniques and technology. These two companies account for 10 percent and 4 percent, respectively, of the Russian market.²⁴

The technology accessible through oilfield services firms to some extent undercuts the impact of sanctions that target the availability of advanced new technology to Russia. Both Schlumberger and Halliburton have reputations as being among the best oilfield services firms to tackle difficult, challenging, and high-risk oil and gas development projects and having the best technology and techniques to extract the most oil and gas. Both companies have tens of thousands of patents to help accomplish this. Both are also among the most adept at tackling difficult political and logistic obstacles to operations.²⁵

Despite being a world leader in oilfield operations, Schlumberger does not own any oilfields or gasfields. It does have the technical capabilities to operate in deepwater development projects, arctic projects, shale oil and gas projects, and other unconventional

projects, and frequently is in demand to provide such services to both international oil companies and national oil companies.²⁶ The major international oil companies involved in such projects primarily bring strong management skills and financial strength to the table, while most of the advanced technical knowledge and applications are embodied in the oilfield services companies.

Russia also has many of its own highly capable oilfield services companies. The largest are Surgutneftegaz, Eurasia Drilling Company, Rosneft, Tagras, and Argos, which combined hold a 30 percent share in the Russian market.²⁷ Russian companies are well versed in the complexities of advanced operations like directional drilling and hydraulic fracturing, which have driven the US shale oil and gas revolutions. Russian companies have also been using these techniques for decades to boost conventional oil and gas recovery. These techniques are still driving Russian oil production growth, primarily through application to smaller and narrower pockets of oil deposits and to formations with tighter reservoirs and lower permeability, or heavier and more viscous oil.²⁸ Besides giving Russia access to hard-to-develop deposits, these and other techniques also help Russia raise its oil productivity for individual wells. A 12 percent increase in expenditures on well workovers in 2016 points to stronger attention to well productivity.²⁹

Schlumberger and Russia's Eurasia Drilling Company, a firm that operates over 650 onshore and offshore rigs, including four of the five rigs operating in the Russian sector of the Caspian Sea, have had a strategic alliance since 2011.³⁰ Schlumberger recently tried to buy a majority share in Eurasia Drilling, but has not acquired the needed approvals from either Russian or US authorities.³¹

Russian oil production growth has been helped by the uneven application of sanctions by the EU and United States.

Russia's four largest oil companies, Rosneft, Surgutneftegaz, Gazprom Neft, and Lukoil, account for more than 70 percent of the demand in Russia's drilling market, according to another Deloitte study. Among the imported equipment and technologies most in demand are those for offshore development; horizontal, controlled-angle, and directional drilling; hydraulic fracturing; artificial lift systems; pumping and compressors; tubing; software; catalysts for oil processing and petrochemicals; and geological and seismic exploration.³² These imports reflect Russia's focus on advanced equipment and techniques to extract oil. Rosneft in particular is increasing its use of horizontal drilling, which went up by 41 percent in 2016.³³

UNEVEN APPLICATION OF SANCTIONS

Russian oil production growth has been helped by the uneven application of sanctions by the EU and United States. Beginning in 2011, US company ExxonMobil signed deals with Rosneft to conduct drilling operations in arctic waters, the Black Sea, and shale deposits in Western Siberia, all of which were suspended by US sanctions. ExxonMobil was also recently denied a request to drill in the Black Sea. In contrast, the Italian firm Eni is moving ahead with plans to drill in the Black Sea on the grounds that the action is part of an existing contract signed before the sanctions; it also plans

23 Ibid.

24 Deloitte, 2015 Russian Oilfield Services Market: Current State and Trends, October 2015, <https://www2.deloitte.com/content/dam/Deloitte/ru/Documents/energy-resources/2015-russian-oilfield-service-market-current-trends.pdf>.

25 James Ball and Harry Davies, "Where There Is Oil and Gas There Is Schlumberger," *Guardian*, May 20, 2015, <https://www.theguardian.com/environment/2015/may/18/where-there-is-oil-and-gas-there-is-schlumberger>.

26 Ibid.

27 Deloitte, 2015 Russian Oilfield Services Market: Current State and Trends.

28 Katya Golubkova and Olesya Astakhova, "Exclusive: Russian Oil Majors Raise Output of Hard-to-Recover Crude," *Reuters*, September 26, 2016, <http://www.reuters.com/article/us-qualcomm-m-a-broadcom-china-analysis/bargaining-chip-china-seen-closely-scrutinizing-qualcomm-broadcom-deal-idUSKBNID706H>.

29 Deloitte, 2015 Russian Oilfield Services Market: Current State and Trends.

30 Henry Foy, "Schlumberger Snaps Up 51% Stake in Russia's Eurasia Drilling," *Financial Times*, July 21, 2017, <https://www.ft.com/content/c3ccabb1-c9ff-37ed-afe6-cd8f95b7b185>.

31 Reuters, "Update 1: Russian Watchdog Says Schlumberger-Eurasian Drilling Deal 'Has Big Problems,'" August 16, 2017, <https://www.cnn.com/2017/08/16/reuters-america-update-1-russian-watchdog-says-schlumberger-eurasia-drilling-deal-has-big-problems.html>.

32 Arthur Karlov, "Russia's Oilfield Services Sector," *Deloitte*, September 30, 2015, <https://www.iesingapore.gov.sg/-/media/IE%20Singapore/Files/Events/iAdvisory%20Series/Russia%202015/520Russia20Oil20and20Gas20OpportunitiesArthur20Karlov.pdf>.

33 Deloitte, 2015 Russian Oilfield Services Market: Current State and Trends.

to drill in the Arctic waters of Russia's Barents Sea. Both actions would occur in partnership with Rosneft and are similar to operations that ExxonMobil has been denied. Eni has said that its actions are allowed because EU sanctions permit partnerships that existed at the time sanctions were imposed to continue.³⁴

Other European companies allowed to keep their partnerships active include BP, which has nearly a 20 percent stake in Rosneft, and the Norwegian company Statoil, which has a venture with Rosneft in the Samara region east of Moscow involving advanced drilling techniques as well as another drilling project in North Komsomolskoye in Siberia. France's Total is participating in building a large new gas liquefaction plant and export terminal in the Yamal Peninsula with the Russian firm Novatek, which is one of the energy firms under US sanctions that would prohibit US company involvement. Five other European companies, the Netherlands' Shell, Germany's Uniper and Wintershall, France's Engie, and Austria's OMV, agreed in April 2017 to help finance Russia's Nord Stream 2 project to export gas from Russia through the Baltic Sea to Germany. These financing agreements for Nord Stream 2 appear to be exempt from sanctions according to current State Department guidance.³⁵

Some other projects, such as ExxonMobil's Sakhalin-1 joint venture with Rosneft, Shell's Sakhalin-2 joint venture with Gazprom, and Statoil's joint project to drill exploration wells in the Sea of Okhotsk, have continued, as they are operations either onshore or in offshore waters less than five hundred feet deep, and thus allowed by sanctions legislation.

Russia has also been able to proceed with several huge projects without the help of major international companies. These include the massive Bovanenkovo gasfield in the Yamal Peninsula and the Power of Siberia gas pipeline from East Siberia to Asia. These have proceeded despite sanctions that have made foreign borrowing difficult for major Russian energy companies and interrupted some projects by the major international companies. In addition to ExxonMobil's setbacks, Shell has neither been able to exploit a deepwater field offshore Sakhalin Island for possible gas or oil production nor been able to begin exploitation of shale deposits in West Siberia because of sanctions.

RUSSIA'S IMPRESSIVE GROWTH IN OIL PRODUCTION

Russia's ability to increase oil output in the past eight consecutive years despite sanctions and lower oil prices is impressive. Russian production has grown from 9.95 million barrels per day (b/d) to 11.23 million b/d over that period, a total increase of nearly 13 percent and an annual average growth of about 160,000 b/d per year (see Figure 1). Since sanctions were introduced in 2014, Russian oil output has grown by an average of about 150,000 b/d. Russia's oil production growth was particularly strong in 2016, growing by nearly 250,000 b/d and accounting for more than half of world oil production growth that year. Oil production is likely to match or exceed 2016 levels in 2017 despite Russia's deal with the Organization of the Petroleum Exporting Countries (OPEC) to curb production.³⁶

Of course, sanctions were not originally intended to impact Russia's oil output. Rather, they were intended to hinder future production of higher-cost oil resources, including those in arctic, deepwater, and shale deposits. Some of those activities may have been delayed or suspended even without sanctions because of their high costs and the sharp drop in oil prices beginning in 2014. Had these projects continued, they may have proved unprofitable in a low-price environment.

ENERGY SUCCESS FUELS GEOPOLITICAL MOMENTUM

Russia has managed a number of small to medium-sized successes in recent years that add up to a boost in political momentum for the country and for President Putin. These successes foremost include dealing with sanctions, raising oil production for the past eight years and gas exports in 2016 and 2017, making progress on the Nord Stream 2 and TurkStream gas pipelines to Europe, and apparently negotiating a favorable deal with the EU on antitrust charges against Gazprom, though it is not yet final.

To understand the role played by energy successes in Russia's reversal in geopolitical momentum, it helps to look back a few years to when Russia's energy sector fortunes looked much bleaker. Leading up to the conflict in Ukraine and for a while afterward, the European Union (backed by the United States) made

³⁴ Ed Crooks and Henry Foy, "US Oil Groups Feel Russia Sanctions Freeze More than Europeans," *Financial Times*, June 19, 2017, <https://www.ft.com/content/4747bc8e-53fd-11e7-9fed-c19e2700005f>.

³⁵ Dow Jones Newswires, "Despite Sanctions, Russia's Oil Industry Powers On," via Fox Business, May 8, 2017, <http://www.foxbusiness.com/features/2017/05/08/despite-sanctions-russias-oil-industry-powers-on.html>.

³⁶ BP, *BP Statistical Review of World Energy June 2016*, June 2017, <https://www.bp.com/content/dam/bp/en/corporate/pdf/energy-economics/statistical-review-2017/bp-statistical-review-of-world-energy-2017-full-report.pdf>. (Data are for oil production in 2008-16.)

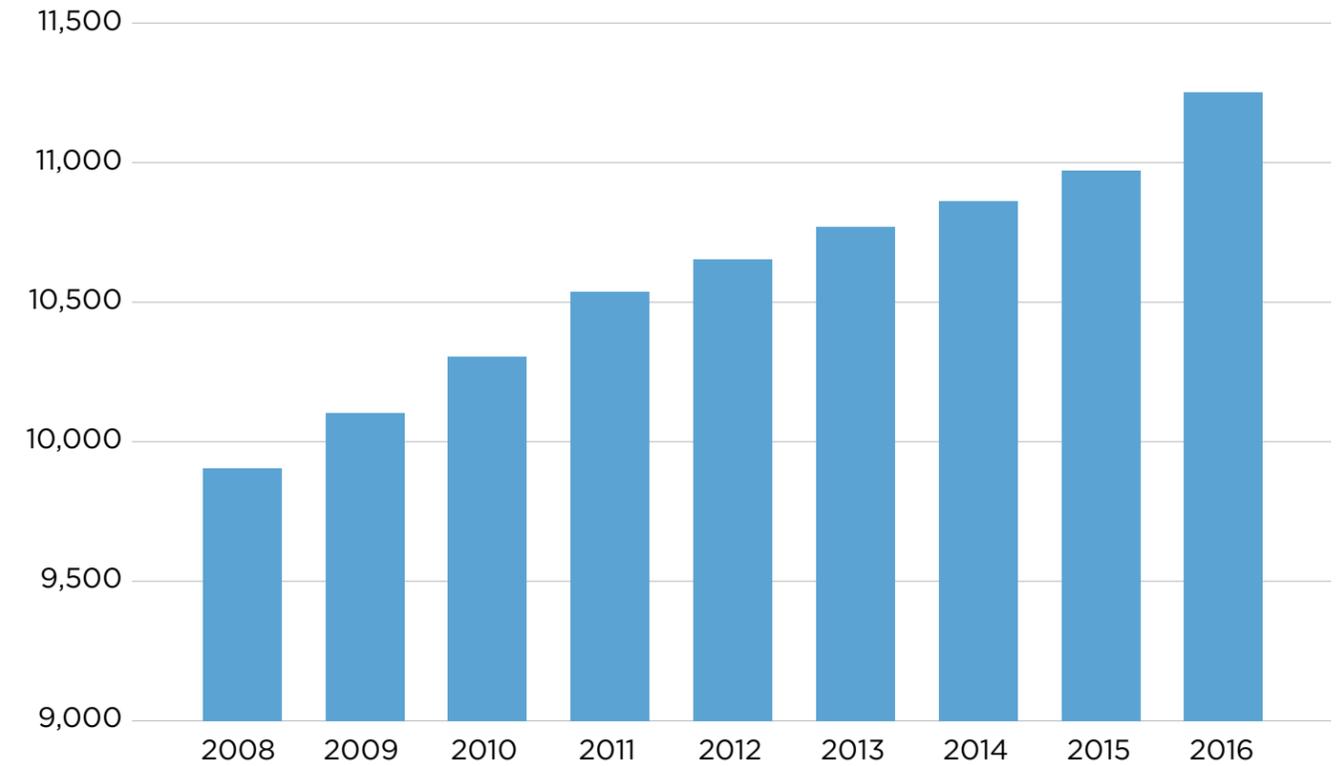


Figure 1: Russia's Annual Oil Production 2008-16 (thousands of barrels per day). Source: BP, *BP Statistical Review of World Energy June 2017*.

considerable strides in improving natural gas supply security by implementing its Third Energy Package laws and regulations and working to integrate the national gas networks in Central and Southern Europe. European countries from the Baltics and Poland south to the Balkan states and Greece were previously almost totally dependent on Russian gas, and almost no infrastructure existed to link Central and Southern Europe with Western Europe.

Russia itself provided the primary motivation for the EU's progress. Russian cutoffs of gas flows through Ukraine in 2006 and 2009 and wide disparities in prices Gazprom charged European countries for gas were primary drivers for the EU's efforts to improve gas security. Russia's takeover of Crimea and support to the conflict in Eastern Ukraine reinforced European efforts to strengthen its energy security.

EU enforcement of its Third Energy Package was largely responsible for the failure of Russia's South Stream Pipeline under the Black Sea to Bulgaria, bypassing Ukraine. Russia cancelled the South Stream project in 2014 after the EU insisted that Gazprom's transit contracts with EU members would have to be

renegotiated and approved by the EU. In November 2015, Russia suspended Turkish Stream because Turkey shot down a Russian plane returning from an attack in Syria through Turkish air space. Around this time, the Nord Stream 2 project had no apparent momentum, Russia's May 2014 \$400 billion gas deal with China was failing, Gazprom's value had fallen from \$367 billion in 2008 to \$53 billion in 2015, and Gazprom had lost the ability to charge vastly different prices for gas exports to European countries. Gazprom was also confronted with the EU antitrust case, which threatened to break its monopoly on gas exports.

Several other trends were working against Russia. Oil prices were still declining or unstable and the EU and US-backed Southern Gas Corridor from Azerbaijan, which will deliver gas as far as Italy and compete with Gazprom in areas where it formerly enjoyed monopolistic leverage, had gained considerable momentum. In addition, the EU created the European Energy Union to spread its energy laws and regulations beyond the EU's borders. This effort includes Energy Community members, such as Ukraine, which could push EU rules and regulations all the way to Russia's

doorstep. The EU also formulated and announced a strong and favorable LNG and natural gas storage strategy in 2016 that could help dilute Moscow's influence in Europe and strengthen EU gas security.

Since then, Russian fortunes in the energy sector have experienced a turnaround, which in turn has reinforced the country's political ambitions. Russian prospects for new gas export pipelines have dramatically improved. Russia has revived the TurkStream Pipeline project with Turkey and the Nord Stream 2 Pipeline now appears likely to move forward.

Despite still lacking a large gas deal with China, Russia is building the Power of Siberia Pipeline to Asia. Volumes to China will be relatively small, at least initially, and prices have not been resolved, but work continues. More broadly, Russia's overall trade with China increased by 22 percent in the first nine months of 2017, according to the *Moscow Times*.³⁷

Russia's concern about access and growth of gas sales to Europe has eased considerably with the progress of its new gas export pipelines and apparently a very favorable deal in the EU's antitrust case against Gazprom, at least on the major issues, which mainly require Gazprom to adhere to EU laws and regulations already imposed. This includes in particular elimination of a contract clause prohibiting the re-export of Gazprom gas.

These developments open the way for Russia to sell more gas to Europe in the future. Already in 2016 and 2017, Russian gas exports to Europe, including Turkey, have jumped to record highs of over 180 bcm. Gazprom has claimed it has another 100 bcm per year of excess gas that it plans to export to Europe, and Rosneft recently announced plans to fund a 30-bcm gas pipeline from Kurdistan to Turkey.³⁸

On a grander scale, Russia has gained stature and standing from its ability to deal with sanctions, attract investment from abroad, and engage major companies in partnering on projects both inside and outside of Russia. Investments by Russian energy companies elsewhere have also given Russia a foothold in ongoing geopolitical conflicts in the Middle East, and have often served as welcome injections of cash.

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IMPLICATIONS

US and EU sanctions have complicated and diminished Russian efforts to attract investment and borrow money abroad, but Moscow has proven capable of dealing with sanctions and keeping oil production on an upward path. New US sanctions legislated in August 2017 are unlikely to significantly impact Russia's energy sector. In particular, recent guidance issued by the US State Department on the Countering America's Adversaries Through Sanctions Act appears to have given the Nord Stream 2 Pipeline project a green light to proceed as these sanctions apply only to investments or loan agreements to energy export pipeline projects initiated on or after August 2, 2017, the date of the act. The guidance also exempts Russia's other two major gas pipelines, TurkStream and the Power of Siberia.³⁹

The new sanctions are also unlikely to keep Russian oil production from continuing to rise. Despite Moscow's pledges to OPEC to reduce its oil production in 2017, it is not clear that it has done so. In fact, International Energy Agency calculations of Russian oil production over the final months of 2017 predict that production in 2017 will match or exceed that in 2016.⁴⁰ This could extend Russia's string of oil output growth to nine years.

Moreover, in the energy sector, US and EU sanctions favor Russia by interrupting high-cost, long-term energy projects that are not currently economically viable, including oil developments in the Arctic, deep offshore projects, and shale oil exploitation. Only new



During a visit to the North-Western Federal District, Prime Minister Vladimir Putin tours the Solitaire, a ship laying pipe as part of the Nord Stream gas pipeline project in the Gulf of Finland. 20 September 2010

sanctions that target current oil and gas production and exports could reverse Russia's upward trend in production over the next few years.

Russia's expansion of natural gas production and gas export pipelines will boost Russian gas exports, negatively impacting EU gas supply security, especially in Eastern and Southeast Europe. Nord Stream 2 especially would make Europe highly vulnerable to a supply cutoff through this route, as well as block the flow of gas through internal European pipelines used by Gazprom. While Gazprom also greatly relies on the European gas market, Moscow still has the ability to exploit divisions among EU members and slow European gas supply diversification by dealing with European countries individually, partnering with European companies, and offering attractive gas prices.

Russian control of European pipelines could include impeding the distribution of US LNG exports from LNG receiving terminals in Europe. Southeast Europe already has a dearth of capacity to import LNG, and countries including Bulgaria, Romania, Ukraine, Moldova, Slovakia, Hungary, and the Balkans are in danger of lacking pipeline connections that can feed them adequate supplies of non-Russian gas in an emergency.

US and EU sanctions favor Russia by interrupting high-cost, long-term energy projects that are not currently economically viable...

US LNG exports are growing rapidly, but Russian aggressiveness in marketing pipeline gas and the low prices in Europe may keep US LNG exports to Europe at a low level. Based on the pace of US LNG exports in the first nine months of 2017, total US LNG exports in 2017 are likely to be more than triple exports in 2016. By 2020, US export capacity is likely to reach 90 bcm per year, equivalent to half of Russia's gas exports to Europe. But US exports are likely to be widely distributed globally; they have already reached twenty-five countries. However, exports to Europe since US LNG exports from the continent began in February 2016 account for less than 15 percent of the total volumes shipped, well below volumes shipped to Latin America and Asia and roughly equivalent to shipments to the Middle East.⁴¹

All this suggests that sectoral sanctions against Russia have not necessarily met their mark. Even when combined with low oil prices, sanctions have yet to deter Russian oil production growth at home and investment abroad.

37 "Russia's Trade with China Up 22 Percent," *Moscow Times*, October 17, 2017, https://themoscowtimes.com/articles/russias-trade-with-china-up-22-to-59285?utm_source=CGI+Daily+Russia+Brief&utm_campaign=0963006540-EMAIL_CAMPAIGN_2017_08_02&utm_medium=email&utm_term=0_814a2b3260-0963006540-281715769&mc_cid=0963006540&mc_eid=54b8cbe246.

38 Dmitry Zhdannikov, "Russia's Rosneft Clinches Gas Pipeline Deal with Iraq's Kurdistan," Reuters, September 18, 2017, <https://www.reuters.com/article/kurdistan-rosneft/russias-rosneft-clinches-gas-pipeline-deal-with-iraqs-kurdistan-idUSL5N1LYOTS>.

39 US Department of State, "CAATSA/CRIIEA Section 232 Public Guidance."

40 International Energy Agency, *Oil Market Report*, October 12, 2017, <https://www.iea.org/media/omrreports/tables/2017-12-14.pdf>.

41 US Department of Energy, LNG Monthly, 2017, https://energy.gov/sites/prod/files/2017/12/f46/LNG%20Monthly%202017_0.pdf.

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