Pushing Back on Putin: Gaining Leverage with Cheaper Oil and Gas

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Executive Summary and introduction

For three years, Russian President Vladimir Putin has seemed immune to the dual stresses of increasingly tighter economic sanctions and stubbornly low oil prices. He has maintained covert pincers on Ukraine sovereignty, captured a diplomatic and military foothold in Syria,¹ and attacked the democratic systems of the U.S. and Europe. In the wake of Putin’s March 18 election to another six-year term, extending his rule through at least 2024, oil offers him the opportunity for even bolder action to come.

Oil, always a tool of bare-knuckled Russian statecraft, has risen substantially in price. From lows between $20 and $40 per barrel in 2015 and 2016, crude oil prices rose above $70 per barrel in January of this year and again in late March. This was the result of surging demand, a historic alliance between Russia and OPEC that tightened supply, a dearth of new investment,² and a more bullish market psychology.

Chastened by the price crash, Russia says it has predicated future state budgets on $40 per barrel of oil, much lower than today’s levels. This fiscal conservatism, combined with the partial price recovery, has given Putin greater latitude for his asymmetrical warfare strategy that has most challenged the West.

In 2017, Russia managed less than 2 percent GDP growth after two years of economic contraction. The squeeze was felt top to bottom: real disposable income fell by 1.3 percent the first 10 months of the year – making it likely that 2017 will mark the fourth consecutive annual decline³ – and, officially at least, Putin cut Russia’s military budget in 2017 and again in 2018 after record spending the prior two years.⁴ But billions of dollars in new oil

revenue would provide the opportunity to turn that around and provide an even broader budget for Russia's ongoing hybrid warfare against the West.\(^5\)

Many analysts forecast a further price surge in coming years, too, taking oil back to $80 per barrel and beyond; some predict prices exceeding $100 per barrel in the early 2020s.\(^6\) Natural gas – just behind oil exports in terms of the contribution to state income – has also seen a rise in prices.\(^7\) In January, liquefied natural gas (LNG) prices in Asia rose to a three-year high, and the previous month they were at a four-year high in the UK.\(^8\)

The U.S. is in a position to anticipate and respond to this new source of Russian spending, and the consequent fresh challenges that it would pose to U.S. geostrategic interests. It should be a national security priority to contain the rise in global oil and natural gas prices as a financial restraint on Putin's capacity to engage in foreign adventurism. The tools at the United States’ disposal are its massive energy resources: its reserves of shale oil and gas as well as its energy technology industry.

**Putin Goes global**

A thread running through Putin's recent military and other actions, including his exploitation of internal divisions across the West, is the goal of restoring the international cachet that Moscow enjoyed during the Soviet period – an obsession that Russia be “taken seriously as a great power,” as one expert expressed it.\(^9\)

Much of this agenda has domestic roots. While he controls the levers of government from the Kremlin to towns and cities, Putin also is vulnerable. In the 2000s, he rode an average 7 percent annual economic growth to outsized popularity. But with the economy stagnated and real wages contracting, he has resorted to blunt nationalistic, anti-American propaganda to buttress his public support. Since 2012, Putin has hammered home the message that Russia’s very survival is at risk from enemies all around, especially the U.S., and that a major war is probable in the next five years or so.\(^10\)

Any Russian with a memory of the late Soviet and Yeltsin periods knows that conditions are better: From 1989 to 2016, income per capita rose by 40 percent and living standards by 10-15 percent.\(^11\) Yet inequality has soared: Russia's top 1 percent earns 20 to 25 percent of the country's income, and, by one estimate, has shipped as much


wealth to financial havens abroad as the entire population holds in Russia itself.\textsuperscript{12} Russian inequality – a potential source of future public discontent – may be worse now than the period from 1905 to 1915, the last years of the Czarist era, when the top 1 percent held 12 percent to 18 percent of national income.\textsuperscript{13}

But Putin is also the latest in a long line of Russian leaders steeped in resentment over a sense of disrespect from the West. Putin's actions abroad have sought to correct that perceived slap at Russia.

Restoring Russia's international cachet means reviving a globally deployable fighting force. Higher oil prices mean greater spending money to create mischief through irregular methods and to rebuild the traditional hard power that is necessary to gain respect among the world's advanced countries.

In February 2017, The Economist observed that the United States views Russia less as a rival great power than the heir of a former great power with a "knack for asymmetric thuggery."\textsuperscript{14} Russia under Putin is known for using Russia's lesser resources to outsized impact in both conventional and unconventional warfare. The latest example is the March 4 alleged nerve agent attack on Russian double spy Sergei Skripal and his daughter Yulia.\textsuperscript{15}

In other examples, Putin used the pretext of Georgian overreach in a conflict with its Ossetian minority to invade in 2008 and essentially annex South Ossetia.\textsuperscript{16} Eight years later, enraged by Ukraine's decision to sign a political association agreement with the European Union, he dispatched his army to annex Crimea and create chaos in eastern Ukraine.\textsuperscript{17} Ukraine has been a petri dish for Russian cyber warfare, with frequent attacks on its electric grid, government agencies, businesses, and ordinary people.\textsuperscript{18} But Putin's actions over the last couple of years demonstrate more sweeping ambitions, too.

\textit{Lifelines to Rogue States}

In November, Russia agreed to restructure $3 billion in loans to Venezuela, thus throwing a lifeline to President Nicolas Maduro, whose country is buckling under $120 billion in debt. In all, Venezuela owes Russia $10 billion. There are sweeteners for this friendship, such as a 49.9-percent stake in refining company Citgo for Rosneft.\textsuperscript{19} Citgo controls 4 percent of U.S. refining capacity. In December, Maduro also granted Rosneft offshore gas drilling rights.\textsuperscript{20}

\begin{itemize}
\item[12.] Ibid, page 5.
\item[13.] Ibid, page 30.
\item[15.] Laura Hughes, David Bond, and Michael Peel, "US, Germany and France blame Russia for nerve agent attack," \textit{Financial Times} (UK), March 15, 2018. (https://www.ft.com/content/81ed2ee-284b-11e8-b27e-cc62a39d57a0)
\end{itemize}
The Russian friendship campaign extends to Havana: Russia is expanding commercial, military, and political ties with Cuba. With Venezuela in desperate straits, Russia is again taking the role of fuel supplier to Cuba, and has also sold the country semi-trucks, locomotives, and passenger vehicles. U.S. military experts worry that Russia could reengage surveillance from the island.  

These are sideshows compared with Putin’s overtures in far more consequential theaters. In Syria, Russia intervened on behalf of President Bashar al-Assad, using jets, bombers, and cruise missiles fired from a distance of 930 miles in the Caspian Sea to ensure his grip on power. An alliance with Iran and Hezbollah added to Russia’s firm new foothold in the Middle East, putting the Kremlin in conflict with U.S. interests.

Putin also sought to insert himself further into North Korean affairs. At least three times last year, Russian-flagged vessels reportedly refueled North Korean vessels at sea, thus giving an economic lifeline to Pyongyang. Toward the end of the year, Foreign Minister Sergei Lavrov suggested that Russia could broker direct talks between the U.S. and North Korea. The aim was to inject Russia into American affairs and make Moscow an essential actor in diplomacy with Kim Jong Un, a move guaranteed to infuriate Washington.

As an overarching strategy, Putin is returning Russia to a global footing, with a presence in Central America, the Middle East, and northeast Asia.

*Traditional Hard Power*

In his state of the nation address on March 1, Putin announced that Russia now possesses a hypersonic missile that travels five times the speed of sound, along with a long-range cruise missile, both of them nuclear-armed and virtually invulnerable to any defense system. “No one has listened to us,” he said. “You listen to us now.” While Putin added that “this isn’t a bluff,” some experts suspect that at least some of his claims were just that.

To the degree the claims were true, added oil and gas revenue would permit Putin to build out his new nuclear system and restore military spending. In 2016, Putin raised military spending to 5.3 percent of GDP – a 5.9-percent increase and the highest among the world’s leading powers. But in 2017 and 2018, he scaled military spending back to 2.85 percent of GDP, according to official government figures. The accuracy of defense spending is not verifiable, nor is the amount channeled to the military from the black portion of the budget.

The U.S. has an advantage in traditional warfare because it is costlier by orders of magnitude. Western experts calculate that Russian operations in Syria in the fall of 2015 cost $4 million per day, or roughly $120 million per...
month. Kalibr missiles launched in Syria cost $1.2 million each, putting the price tag on each 26-missile volley at around $31 million.²⁸

That Putin treated Syria operations as limited in scope is demonstrable in his primary battlefield strategy, described by RAND in a recent study as advancing “a rapid, coordinated coup de main, attempting to achieve campaign objectives in a very short period of time.” The objective is “to achieve surprise (if possible), leverage superiority in firepower, seize objectives using highly mobile forces, and subsequently terminate a conflict before an adversary with superior long-term potential military power could bring the full weight of a response to bear.”²⁹

Higher oil prices, however, would make expensive operations easier to justify. Russian jets could continue to buzz U.S. and other Western forces in Europe, and submarines could persist in surveilling crucial North Atlantic undersea data cables, which has suggested to some a strategy to cut Internet traffic between the U.S. and Europe.³⁰ Most recently, U.S. investigators suspected that Russian operatives under diplomatic cover were mapping American communications chokepoints, again triggering concern of potential future disruption.³¹ Such an attack might adversely affect services routed through dedicated fibers instead of by the Internet, or through compromised infrastructure.

**Information and Cyber Warfare**

Russia’s military budget is not transparent, but information and cyber warfare fall under defense and intelligence spending. In 2013, the monthly budget of the St. Petersburg-based trolling farm called the Internet Research Agency was around $1 million. According to a Russian business newspaper, the Internet Research Agency spent around $2.3 million on its American operations between June 2015 and the fall of 2017, when Facebook and other social media platforms began closing off its accounts and communities.³²

By comparison, the Clinton and Trump campaigns spent a combined $81 million on Facebook ads.³³ That led some experts to say the effect of Russian trolling was vastly exaggerated, but the outsized impact of such inexpensive operations is often misunderstood.³⁴ Central to the Russian playbook going back to Stalin is needling existing hostilities and igniting war – between the Azeris and the Armenians, the Georgians and the Abkhaz, the Georgians and the Ossetians, the Uzbeks and the Tajiks, eastern and western Ukrainians, and now democrats and republicans. In short, the deliverable for Putin is to contribute to American and European societies tearing themselves apart. That is not a small impact.

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32. Andrei Zakharov and Polina Rusyayeva, “«Фабрика троллей» потратила на работу в США около $2,3 млн (‘Troll Factory’ spent about $ 2.3 million to work in the U.S.),” *RBK* (Russia), October 17, 2017. (https://www.rbc.ru/technology_and_media/17/10/2017/596ebea979472577375776)
Coming off its influence operations during the 2016 U.S. election, the Kremlin has applied the same playbook in referendums and elections across Europe. Analysts suspect Russian influence operations in Dutch elections in March 2017, French elections in May 2017, and the Catalan independence referendum in October 2017. During the year leading to September 2017 federal elections in Germany, the country’s usually mum intelligence agencies flagged Russian meddling. And in a November 2017 speech, British Prime Minister Theresa May called out Russian influence operations: “We know what you are doing,” she said.

The November U.S. midterm races are also said to be already under Russian cyber attack. In September 2017, the Department of Homeland Security informed election officials in 21 states that Russian government hackers had targeted their voter registration files or public election sites in the summer and fall of 2016. U.S. officials have also warned political candidates to expect Russian meddling in their 2018 campaigns.

Russia has also demonstrated its cyber capabilities on critical infrastructure. Two days before Christmas 2015, a cyber attack linked by experts to Russia took down major sections of the Ukrainian electric grid, severing power to some 250,000 people. In 2016, a similar electric grid attack occurred. Engineers restored power within hours in both incidents, but the message seemed voluble: Russia was prepared to sabotage the critical infrastructure of target countries. On March 15, the FBI and the Department of Homeland Security issued an alert detailing two years of Russian attacks on U.S. energy infrastructure.

In Ukraine, it was part of what one journalist called a “digital blitzkrieg,” in which apparent Russian hackers mounted their sustained attack on the country’s finance, transportation, energy, and media sectors. In June 2017, NotPetya – first presumed to be a ransomware program, then identified as a Russian military intelligence operation – crippled several Ukrainian ministries and private companies, including shipping and logistics giant Maersk. The estimated cost of NotPetya to its victims has risen to several hundred million dollars. Similarly, the three Baltic countries, Norway, and Sweden have been subject to frequent disruption of communications in attacks attributed to Russia.

Russia’s tactics also include false flag operations. In the recent Winter Olympic Games, Russian cyber operatives disguised themselves as North Korean hackers and breached several hundred computers, causing minor disruptions to Internet connectivity as well as broadcast and ticketing systems. Apparently retaliation for Russia’s official exclusion from the games, the intrusion demonstrated to the public back home that their leaders were not watching idly by as their athletes were humiliated by the country’s enemies.

All of this can be seen as practice for Russia’s perceived main adversary. In addition to hacking the U.S. energy industry, Russia attacked critical infrastructure in the UK, according to the chief executive of the UK’s National Cyber Security Centre.

Prior attacks continue to haunt the U.S., in particular the theft of some of the NSA and CIA’s most sensitive surveillance tools and their public disclosure by the Russia-linked “Shadow Brokers” and WikiLeaks in its Vault 7 and 8 releases. The theft and subsequent release of the stolen material suggest a Russian effort to erode U.S. capabilities to track and counter foreign operations.

Sanctions and Low Oil Prices

A long period of contained oil and gas prices may be the best instrument for restraining Putin's capacity for the projection of hard power. Low prices in concert with other steps described in Part III are also likely to curb Putin's information and cyber warfare.

In 2014, when the West enacted sanctions in response to the Russian annexation of Crimea, they were explained as an economic squeeze to push Moscow to reverse policy in Ukraine. By the end of that year, an unexpected economic force punished Russia further – a plunge in global oil prices, triggered by a Saudi-led OPEC campaign to contain Iran’s oil windfall and to push U.S. shale oil out of the market.\(^5^2\) Together, the sanctions and lower oil prices seriously reduced the export income that sustains Russia's state budget, while also undercutting Putin's long-term economic plans as Western companies were barred from working on the country's main next-generation Arctic and shale oilfields. The U.S. and Europe increased the already high cost for the March 2014 annexation and subsequent invasion of eastern Ukraine in the intervening months and years by ramping up the sanctions further. In February, ExxonMobil officially withdrew from long-term oil development projects in Russia, including a deep-sea field in the Kara Sea and a gigantic shale deposit in Siberia called Bazhenov, because of the sanctions.\(^5^3\)

Russia’s economy was already dragging during the two years of $100 per barrel of oil in 2012 and 2013. When Brent crude averaged $108 per barrel in 2013, for instance, the economy grew by just 1.3 percent. By November 2014, oil – the biggest export earner and source of more than half of Russia’s national budget – was below $80 per barrel, inflation was at 9 percent, and the ruble experienced its greatest plunge in value in 11 years. Eight months after the initiation of U.S. and European sanctions, the Russian currency devalued 30 percent; even a $30 billion infusion from the central bank failed to halt its plummet. The Bank of Russia also accelerated an announced plan to allow the ruble to float, abandoning the fixed rates and monetary interventions that were a staple of Soviet and post-Soviet monetary policy.\(^5^4\) To tamp down inflation, it raised interest rates and cut the state budget.\(^5^5\)

At first, the central bank's move was ineffectual – over the subsequent three weeks, the ruble lost another third of its value. The bank intervened again, relaxing access to cash reserves for needy banks. The ruble recovered, surging by 14 percent in value in a single day.\(^5^6\) Inflation soared to 15.5 percent in 2015, but fell to 7 percent just a year later and, by


November 2017, dropped to a 2.5 percent annual rate. In early 2018, the government deficit was at 1.5 percent of GDP and net debt at a conservative 8.4 percent of GDP.

Putin challenged his advisers and entrepreneurs to further wall off Russia from the pressures of the global sanctions and low oil prices. In agriculture, he succeeded. Russia had been importing U.S. and other wheat since 2001, but as a result of a three-year push, Russia became the world's biggest grain exporter by 2016. From 2014 through 2017, agricultural imports fell from $43 billion to $25 billion a year, a 42 percent plunge. This was aided by the devalued ruble, a plummet in global fertilizer prices, and a domestic ban on many food imports. Russia raised all its own pork and chicken, and its vegetable production surged. Agriculture also overtook arms sales as Russia's second-highest cash export, behind only oil and natural gas.

Putin has similarly drawn a wall around what he has branded Russia's strategic industries – oil, metals, and banking enterprises – in addition to an array of other industrial businesses. Since 2014, all have received substantial financial bailouts from the central bank.

The Ruble Float and Oil Prices

Russian central bank actions helped to stabilize plummeting oil prices. In 1987, Soviet oil production was about 11.4 million barrels per day, but by the time Putin took power in 2000, production had plunged to 6.5 million. Fourteen years later, it was back above 10 million barrels per day.

Ordinarily, a drop of oil prices like that of 2014 and 2015 would heavily reduce export income. But because of the devalued ruble, the effective loss was much less. Russia received dollars for its oil and used devalued rubles for expenses at home. In addition, Russian oil industry taxes paid to the state automatically adjusted to prices – when oil prices were lower, the tax rate dropped, and visa-versa. The combination of the floating ruble and the adjusting tax worked to “act as a very effective cushioning mechanism for wellhead operating margins,” a senior Citigroup analyst observed.

The ruble strategy paid off again in January 2018, when the price of Brent crude hit $70 per barrel, its first time to do so since the price crash began in 2014. At that price, Russia earned 3,970 rubles per barrel, higher than the

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64. Ronald Smith, “Don’t Bet on Russia Capping Oil Output,” Financial Times (UK), October 3, 2016. (https://www.ft.com/content/8741742a-8643-11e6-8897-2359a58ac7a5)
approximately 3,400 rubles it received when oil briefly touched $147 per barrel in 2008. With the higher price, Russia restored hard currency reserves to about $433 billion, up 20 percent from 2015, and used some of the added rubles to buy more hard currency to keep the local currency stable. This strategy enabled Russia to insulate itself from low oil prices, drive down inflation from 17 percent in 2015 to around 2 percent in late 2017, and profit both in terms of rubles and dollars.

Russia is operating on the premise that this is the new normal. In an interview with Bloomberg, Russian Economy Minister Maxim Oreshkin said the state budget is predicated on oil exported for an average of $40 per barrel. He said Russia is prepared to “live forever” with oil at that price.

Putin’s OPEC Surprise

In November 2016, Russia agreed to join OPEC in an unprecedented joint production cut – a 1.8-million-barrel-per-day global reduction that, it was hoped, would bolster and push oil prices back up. The move surprised analysts since Moscow had historically snubbed OPEC, and Saudi Arabia and Russia were long-time antagonists. The move intended to initiate a drawdown of millions of barrels of surplus oil stored around the world that were weighing on oil prices. And it began to work. When the cut went into effect, prices were around $50 per barrel; by the end of 2017, the cuts were believed to have contributed to a 32-percent price surge to around $66 per barrel. In November 2017, Russia and OPEC voted to extend the cut through the end of 2018 to work off a remaining 140-million-barrel surplus, leading to a price of more than $70 per barrel.

Despite this successful effort to drive up prices, there is now the potential for a new global supply glut in 2019 thanks to a surge of U.S. shale oil production in response to rising prices. As a demonstration of U.S. shale’s influence on global prices, after Brent rose to $70.37 per barrel in January 2018, traders pushed it back down by 2 percent, largely because of reports of a surge in new U.S. shale supply in response to the higher prices. On January 19, the International Energy Agency (IEA) forecast that U.S. oil production would reach 10.4 million barrels per day in 2018, surpassing the November 1970 U.S. record and making the United States the second-largest global oil producer, pushing past Saudi Arabia. About three weeks later, the market took another hit when the U.S. Energy Information Administration produced a new forecast: U.S. production would rise to a record average of 10.7 million barrels per day and then climb to 11.3 million barrels per day by 2019, surpassing the enormous surges of the 2012-2014 U.S. shale heyday.

In all, the IEA expects new and restored volumes from the U.S., Canada, Brazil, Iraq, and other non-OPEC producers to add 1.7 million barrels per day to the global oil supply. This will most likely result in market balance once expected cuts from Russia and Saudi Arabia are taken into account, the IEA said.

66. Ibid.
72. Ibid.
According to BP analysis, OPEC, Russia, and the U.S. — with the advantage of low-cost production and large reserves — will largely crowd out other oil suppliers over the coming two decades, reaching a combined 63 percent of the global market by 2035, from 56 percent today.\(^73\) If that scenario materializes, the U.S. will then vie with Russia and OPEC for market share. OPEC and Russia will have the natural advantage as the lower-cost producers. Yet American producers are well positioned, unburdened by the others’ urgent need to cover their state’s annual budget with oil sales, and thus enjoy more flexibility for enduring competition in the marketplace.

Other forecasters say demand growth will be significantly higher, and if it is, it could overpower supply and push prices higher. But in that case, U.S. shale and other producers may be incentivized to bring on even more new and restored supply. Because of this dynamic, some analysts say prices may be effectively capped at around $70 per barrel.\(^74\) Others insist the market is poised to push considerably higher.\(^75\)

The absolute oil price is an important but not crucial strategic metric in terms of Russia’s capacity to carry out policy. Russian Energy Minister Alexander Novak said that the February price — about $64 per barrel — was “acceptable,”\(^76\) which is probably correct. At that price, Putin is able to fulfill the essential obligations of government, along with his ambitious foreign adventures.

U.S. policymakers should give less credence to Russian assertions of long-term fiscal balance at $40 per barrel. After almost five years of low prices, Russia is holding its own but requires a higher oil price to mitigate the hit to living standards suffered by ordinary Russians since the financial crash and its aftermath. Sustained U.S. oil and LNG exports will maintain the fiscal pressure and give the U.S. possibly its best shot at containing Putin and pushing him to concessions.

**Natural Gas**

Energy analysts are increasingly backing away from forecasts of a global glut of liquefied natural gas (LNG), another key Russian export, and forecasting robust demand through at least 2035.\(^77\) Current and future production is coming from the U.S., Canada, Cyprus, Egypt, Iran, Israel, Mozambique, Mexico, Papua, New Guinea, Senegal, Tanzania, and Trinidad, to name a few. Together, they plan 42 billion cubic feet (bcf) of new LNG capacity. The growing consensus, however, is that China and other buyers are absorbing whatever is produced.\(^78\)

U.S. LNG exports are for the first time crossing the globe. Among the economic impacts have been the ability to contain global gas prices, expand into more competitive spot gas markets, and undermine oil-linked gas pricing that has tended to advantage Russia and disadvantage its gas customers. This trend serves multiple American
geostrategic interests – the more LNG India buys, for example, the more challenging it will be to finance the
construction of a new pipeline to transport Iranian natural gas across the subcontinent.

Of course, the price of U.S. LNG gas in Europe can be more expensive than Russia’s pipeline gas. When you add $3
for liquefaction, regasification, and shipping at both ends, the U.S. LNG price to Europe doubles to about $6 per
million/British thermal units (btu). Russia, however, continues to meet about a third of Europe’s gas demand.
In 2016, Russian spot market prices were $4 per million/btu at one stage. In 2017, they rose to $5 per million/btu.
Both years, that undercut U.S. LNG, with only 13 percent of U.S. LNG sales going to Europe. Meanwhile, Russian
gas exports to Europe surged last year by 8 percent to an all-time high.

This raises the question of how the U.S. can gain any leverage. Yet, U.S. LNG remains a strong player and is seen
as a superior or equal choice in some markets, such as Asia, and a strong alternative in others, like Europe. This
emergency go-to role makes U.S. gas highly disruptive. As of October 2017, federal agencies approved 20 bcf per day
of LNG capacity. From 2005 to 2016, U.S. gas exports tripled from 0.7 trillion cubic feet (tcf) to 2.3 tcf. Natural gas
liquid (NGL) exports rose from 60,000 barrels per day in 2006 to 1 million barrels per day in 2016. End product and
NGL exports rose to about 4.1 million barrels per day by mid-2017, from less than 2 million barrels per day in 2005.

In Europe, the American appearance in the market has forced Gazprom to contain its price demands, thus
pressuring the Russian economy. In Asia, America’s presence has led buyers such as Japan to renegotiate contracts
signed with oil-indexed suppliers. American gas is why Asia and Europe have seen LNG and piped gas prices
plummet since 2013.

What is needed now is a policy to encourage gas consumption and LNG’s shift to a global commodity, which
would make piped gas less important. The U.S. Energy Information Administration forecasts rapid LNG export
growth after 2020, and BP predicts the potential for tight supplies. Thus, the fight for market share becomes the
battleground. Notwithstanding the convenience of Russia-China pipelines, BP forecasts that future LNG demand
– because of its flexibility in terms of delivery – will grow seven times faster than piped gas, and account for half
of globally traded gas, up from 32 percent now. Therefore, even if the U.S. struggles to win market share against
cheaper piped Russian gas, the mere availability of an alternative will maintain the price pressure and restrain any
new Russian gas cutoffs since it will no longer enjoy monopoly market power. “America’s greatest contribution will
be changing the way gas business is done, rather than grabbing particular market share,” one expert told Reuters.

In all, about 30 countries buy U.S. LNG, including Japan, Lithuania, South Korea, and Vietnam. One important
sign of new demand for U.S. LNG occurred in February when Cheniere Energy signed a 25-year supply deal with
China. Until this contract, China had bought only U.S. spot cargoes. The deal came three months after China’s
state oil company signed a preliminary agreement to invest in a $43-billion LNG export facility in the southern

83. Ibid, slide 57.
Alaskan coastal town of Nikiski that would compete with Russia’s Yamal LNG export terminal in the Arctic.\textsuperscript{85} The two contracts appeared to demonstrate a Chinese conviction that it needs to lock in American LNG.\textsuperscript{86}

In another sign, Poland in 2015 said it would sever an exclusive 76-year-old natural gas supply arrangement with Russia’s Gazprom and contract for U.S. LNG.\textsuperscript{87} This was significant because there had been Russian pressure on Poland to stay with Gazprom, and it therefore serves as an example that other countries could follow.

As a trend line, the International Energy Agency sees “a shift towards a more flexible, liquid, global market,” led by the pricing influence of U.S. supply.\textsuperscript{88} “With destination flexibility, hub-based pricing and spot availability, U.S. LNG acts as a catalyst for many of the anticipated changes in the wider gas market,” the IEA says. In all, the number of LNG terminals worldwide will double by 2040 in response to real or expected demand, mainly in the U.S. and Australia.\textsuperscript{89}

\textbf{Figure 1: The growth of U.S. LNG exports will change the global LNG market dynamics in coming decades}

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\caption{The growth of U.S. LNG exports will change the global LNG market dynamics in coming decades.}
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\textit{Source: BP\textsuperscript{90}}


\textsuperscript{86.} “Cheniere signs long-term LNG export deal with China,” \textit{Financial Times} (UK), February 9, 2018. (https://www.ft.com/content/cf27354a-0dbf-11e8-8eb7-42f857ea9f09)


\textsuperscript{89.} Ibid.

Meanwhile, Russia said recently that it will work to combat the U.S. gas juggernaut. A Kremlin spokesman said the U.S. was engaged in “unfair competition” and that Russian companies, including Gazprom, “will fight against it.”

Pipeline versus LNG?

The LNG battle is particularly sharp in Europe. A long Russian ambition has been to build another large natural gas pipeline into Europe – Nord Stream II, a twin to an existing line that would terminate in Germany. The U.S. has pushed back against the line, arguing that Nord Stream II would further lock Europe into the Russian universe, making the continent even more vulnerable to Putin’s gas-led geopolitical pressure. Over the years, for instance, a shutoff of gas supply has coincided with political brawls with Belarus, Georgia, Moldova, and Ukraine. In 2006, 2008, and 2009, shutoffs to Ukraine resulted in downstream European countries shivering in the winter cold. The transformation during recent years in European politics, with a higher profile of pro-Kremlin elements in many countries, has weakened the U.S. hand and made a Russian triumph on Nord Stream II more likely.

Some argue that Nord Stream II represents an obsolete strategy that ignores LNG’s enormous economic and technological advances. If Russia pushes ahead with Nord Stream II, it keeps the cost advantage, but locks itself into an old, inflexible system whose economics could be eroded over time by the LNG’s market nimbleness along with its steady cost advances.

Aware of the risks, Russia is hedging. In December, it inaugurated its LNG export facility at Yamal, in the Russian Arctic, built by Novatek, France’s Total, and China’s CNPC. Russia aims to capture 15-20 percent of the global LNG market with Yamal and a second proposed project nearby in the Arctic, taking advantage of the improving economics brought by melting ice to ship its LNG along quick routes to Asia. Russia circumvented sanctions intended to constrict Arctic development by obtaining $12 billion in project funding for Yamal from Chinese banks (Yamal cost $27 billion in all). But the Russians have a long way to go if they wish to dominate this market. In one report, Fitch said, “Securing long-term contracts and funding new LNG projects in these circumstances is a challenge, even more of a challenge for Russia.”

A full examination of the sanctions regime and recommendations in this regard are outside the scope of this paper. But in August 2017, Congress approved new sanctions that threatened penalties against foreign companies investing in, or lending money to, Russian energy pipelines in Europe. In March 2018, a bipartisan group of 39 senators wrote a letter to the Treasury and State departments urging the administration to work to stop the Nord Stream II pipeline. In response to the letter, the State Department spokesperson made the administration’s policy clear: “We oppose the Nord Stream 2 project” and “We believe that the Nord Stream 2 project would undermine Europe’s overall energy security and stability. It would provide Russia another tool to pressure European countries, to...”

93. Henry Foy, “Russia ships first gas from $27bn Arctic project,” Financial Times (UK), December 8, 2017. (https://www.ft.com/content/515d451c-dc11-11e7-a039-c64b1c09b482)
94. Henry Foy, “Russia’s LNG ambitions no longer a pipe dream,” Financial Times (UK), December 27, 2017. (https://www.ft.com/content/0eab8142-e621-11e7-97e2-916d4fbaa0da)
especially countries such as Ukraine.” On the potential for sanctioning those firms involved with construction of the pipeline, the spokesperson confirmed that “firms that work in the Russian energy export pipeline sector … could expose themselves to sanctions under CAATSA.”

**Efficiency and an Electric Challenge**

A primary way to contain oil prices is to tamp down demand. One option is to build on the efficiency of combustion engines, including the planned increase of light vehicle and truck mileage standards that could lower American oil consumption by about 2 million barrels per day, depending on the precise reduction determined by the administration. Another is electrification of the global light vehicle and cargo fleet, particularly since transportation comprises about half of daily global oil consumption. In future decades, semi-trucks will consume an increasing percentage of the fuel supply, and hence are a particularly important target for electrification.

In a January 23 note to clients, Bank of America forecast a rapid expansion of the electric car market, reaching 40 percent of total vehicle sales by 2030, slashing fuel consumption, and leading to a peak in global oil demand the same year, as fewer vehicles would use gasoline. Electric vehicles, according to the forecast, would go on to comprise 95 percent of all car sales by 2040, cutting even more demand. While less bullish, a July 2017 forecast by Bloomberg New Energy Finance predicted that electric vehicles would make up 54 percent of all vehicle sales by 2040 and displace 8 million barrels of oil per day. By comparison, the dramatic 2014-2016 oil price plunge was triggered by 4 million barrels per day of new U.S. shale oil production.

Although most major oil companies are also less bullish, they have been raising their projections. In its latest public outlook, BP forecast that a combination of more fuel-efficient combustion engines and 100-fold growth in the global electric car fleet would result in a flattening of oil demand by 2040. The International Energy Agency, by contrast, expects oil demand to decline by 2.5 million barrels by 2040.

Currently, the federal government seeks to stimulate electric sales with a $7,500 tax credit, but there was pressure last year from some Republicans to rescind it. The Trump administration has demonstrated an openness, when it sees geopolitical strategic advantage, to the general idea of government financial backing of renewable energy.

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How the U.S. Should Respond

Putin’s soft underbelly is his oil and gas income. These recommendations to policymakers in Washington and European capitals are aimed at muting the rise in global oil and natural gas prices, reducing demand for these fossil fuels, and hence lowering the increase in Russian export earnings.

- **Encourage global LNG demand:** Guarantee funding for LNG terminals. Encourage the shift toward spot pricing and away from long-term, oil-linked contracts. Specifically, encourage Chinese and Indian consumption of LNG. Encourage a shift away from diesel to electric heavy trucks, locomotives, and ships, whose consumption makes up the bulk of future growth in crude oil demand. Remove tariffs on the sale of LNG to make American LNG more competitive.

- **Attack oil demand:** Maintain the planned doubling of light vehicle CAFE standards and increasing the efficiency of heavy trucks. Extend the $7,500-per-vehicle tax credit for light electric car sales. Maintain Department of Energy-funded research and development of better advanced batteries and more efficient combustion engines. In European gas markets, continue to support the construction of wind and solar electricity systems, thus eroding demand for piped Russian supply.

- **Mute future Russian oil production:** Continue sanctions on Russian imports of U.S. fracking and Arctic technologies. As of now, oil and gas drilling equipment constitute the largest Russian import from the U.S.

- **Collaborate with Saudi Arabia:** These policy prescriptions stand to inflict fiscal damage on other petro states, including traditional ally Saudi Arabia. The administration should disrupt Russian and Saudi cooperation on oil strategy and persuade Saudi Arabia that containing Russia is in Riyadh’s long-term interest and aligns with its Vision 2030 strategy.

- **Implement Section 232 of CAATSA:** This section of the Countering American Adversaries Through Sanctions Act provides the administration with the tools to sanction Russian energy export pipeline projects. Entities who assist in building Russian projects such as Nord Stream II or TurkStream should be subject to these sanctions. Raising the cost of these projects, and potentially halting them, is an important step to lessen Russia’s energy leverage over Europe and to diminish future income gains for the Kremlin.

- **Step up cyber protections:** Act to protect electric grids, pipelines, and nuclear energy infrastructure. Demand continuity and quick recovery plans from businesses running critical infrastructure. Run regular “day-after” exercises to prepare for a situation in which a hostile actor disrupts parts of critical infrastructure.

- **Name and shame cyber collaborators:** Continue to expose links between Russian state security organs and active cyber campaigns against Western interests. Limit market access for companies collaborating with Russian state security services. Name, shame, litigate, and sanction individuals supporting the campaigns.

The impact of these measures, employed alongside the very few demonstrably effective diplomatic instruments at the disposal of the United States, would sustain economic pressure on Russia, creating leverage for later negotiations on U.S. strategic aims.

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