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Molecule Indifferent Gas Geoeconomics, Not Energy Sanctions, are the Best Option to Harden Europe Against Russian Gas Coercion

Gabriel Collins, J.D.
Baker Botts Fellow in Energy & Environmental Regulatory Affairs,
Center for Energy Studies

Anna Mikulska, Ph.D.
Nonresident Fellow, Center for Energy Studies

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> "*The pipeline will be built and the British, the French, the Germans and other Europeans will stick to the agreement which their firms have been making with the Soviets*."—Helmut Schmidt, Chancellor, West Germany, July 1982[1]
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> "*I am deeply concerned at the growing use of sanctions, or the threat of sanctions, by the United States against European companies and interests. We have witnessed this developing trend in the cases of Iran, Cuba, the International Criminal Court and most recently the Nordstream 2 and Turkstream projects*."—Josep Borrell, High Representative/Vice President, European Union, 17 July 2020[2]

Déjà vu, 2020 looks quite a bit like 1982…at least insofar as the U.S. and major European partners find themselves in yet another high-stakes diplomatic standoff over a natural gas import project from Russia. This time, the star of the show is the nearly completed Nord Stream-2 gas pipeline running from Russia to Germany under the Baltic Sea. Only 160km of pipe remain to be laid, but the project's political risk has exploded in recent weeks.

On 15 July 2020, the U.S. State Department updated its public guidance on the NS-2 and TurkStream gas pipeline projects. It deleted five words, five digits, and a comma ("…*initiated on or after August 2, 2017*…"), and with that pen stroke, made the $11 billion project thereafter broadly sanctionable under Section 232 of the Countering America's Adversaries With Sanctions Act (CAATSA).[3] Since December 2019 there had been a narrower sanctions risk, as Section 7503 of the U.S. National Defense Authorization Act for Fiscal Year 2020 authorized sanctions against pipelaying vessels involved in the NS-2 and TurkStream gas export pipeline projects.[4]

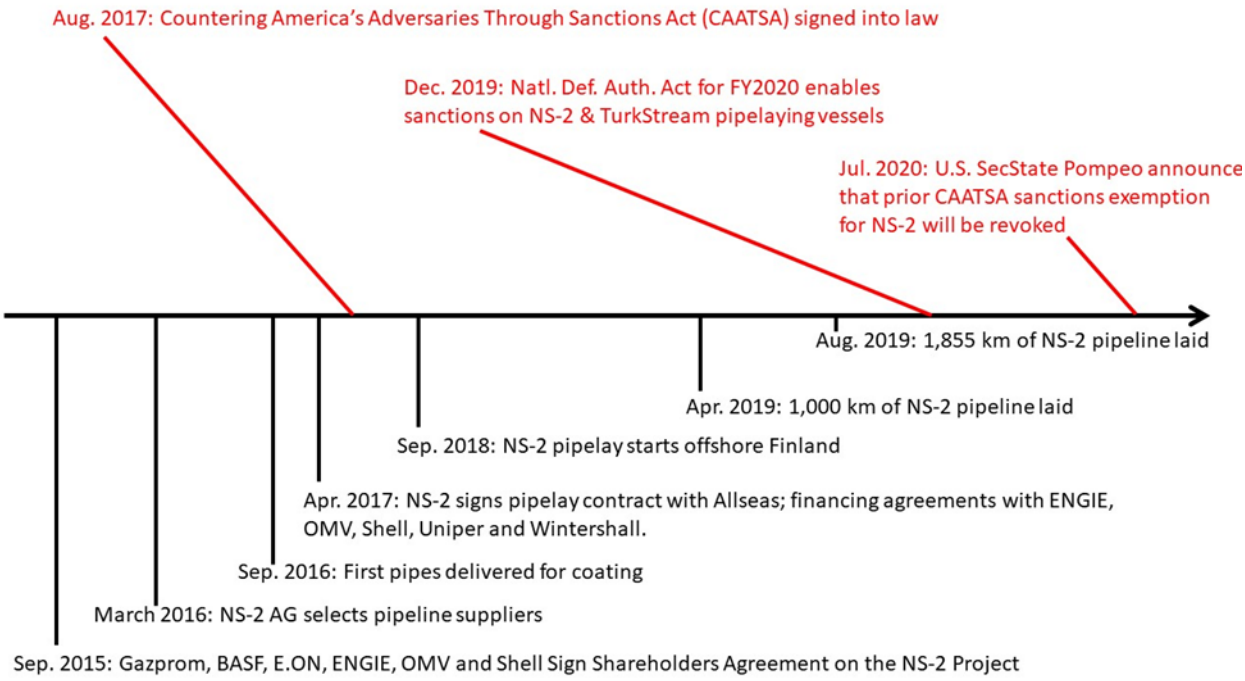
The EU reaction has been strong, with the Union's chief diplomat, Josep Borrell saying "*As a matter of principle the European Union opposes the use of sanctions by third countries on European companies carrying out legitimate business*" and that furthermore, the EU "…*considers the extraterritorial application of sanctions to be contrary to international law*.[5]

The abruptness of recent U.S. actions against NS-2 likely intensifies EU frustrations. In August 2017, the Countering America's Adversaries Through Sanctions Act (CAATSA) put the corporate world and U.S. partners on notice that they could face sanctions for facilitating the construction of energy export pipelines from Russia. But the State Department then promptly attenuated the risk perception by issuing guidance that "…*limited the focus of implementation of Section 232 to Russian energy export pipeline projects for which a contract was signed on or after August 2, 2017*."[6]

The NS-2 project was thus originally exempted from sanctions because foundational contracts had been signed almost two years prior to CAATSA becoming law even though the imperatives now cited as rationales for removing the exemption certainly existed when the exemption was issued in 2017. Indeed, they existed for many years prior to that (in particular, the idea that "*Russia uses its energy export pipelines to create national and regional dependencies on Russian energy supplies and leverages these dependencies to expand its political, economic, and military influence and undermine U.S. national security and foreign policy interests*.")[7] The substantial delay between original exemption and subsequent dialing up of risk means that European interlocutors can fairly raise the question of "*Russia is as malign in 2020 as it was in 2017, so why didn't the U.S. swing the sanctions hammer before we paid in our money and emplaced 1,900km of subsea pipeline?*"

Exhibit 1 (below) summaries key contractual and sanctions risk events through the NS-2 pipeline project's history to date.

Exhibit 1: Key Contractual, Construction, and Sanctions Risk Events For NS-2 Pipeline Project



Source: Nord Stream-2 Consortium, U.S. Department of State, U.S. Department of the Treasury, Authors' Analysis

With the Nord Stream-2 fight fully in view, this Brief will critically analyze the impact of energy-related sanctions directed toward Russia as a way to curb Russian geopolitical influence and blunt Moscow's ability to coerce European gas consumers.[8] We compare such sanctions to instances where geopolitical problems are instead primarily confronted through a strategy of market-based resilience rooted in the practice of geoeconomics.

While the Brief focuses on energy sanctions in a largely European context, its analytical conclusions impact a much broader issue that is vital to the foreign policy of multiple U.S. allies, as well as broader stability and risk management across global commodity and financial markets. The Brief does not focus on oil markets because oil is among the most fungible of all commodities and its relative ease of transport and diverse slate of global suppliers curtail the ability of any single supplier to unduly coerce specific consumers.

Downsides of a Sanctions-Based Policy

U.S. policymakers have increasingly relied upon energy-related sanctions as a core foreign policy tool over the past 25 years. Energy-centric economic warfare actions are politically attractive. They do not put servicemen and women in harm's way. And they can be rapidly implemented through executive authority, allowing for the White House to use them as a political signaling mechanism without needing to incur the time and effort necessary to obtain Congressional support. But convenience of use risks clouding our strategic thought process and emphasizing the act of hammering on apparent "nails" rather than thinking critically about the structure U.S. policymakers are building for today, much less 5, 10, or even 20 years from now.

The 1982 U.S.-Europe episode outlined above occurred in a strategic environment materially different than today's, but also illustrated a number of risks that remain relevant now, and which emphasize the need for creating a set of market-based policies that constrain Russian energy coercion and revenue generation potential on a multi-decade timeframe.[9] Energy-related sanctions can create side effects that undermine their strategic objectives, particularly if they are unilaterally imposed. They take a long time to work. Economic pressure invites adversaries to create workarounds and/or forge alliances that actually increase net strategic risk. Sanctions can also invite counter measures, such as counter-sanctions or other undesirable actions that can escalate and also hurt the economies of the sanctioning entity and its allies. Sanctioning a country can alienate allies, if those don't participate in the sanctioning activities and/or don't see sanctions. Finally, excessive reliance on sanctions can signal regime's weakness, i.e. inability to influence other countries behavior via other means. This can encourage pain-tolerant regimes to entrench, and ultimately catalyze further instability.

Economic sanctions related to energy matters owe much of their "bite" to the fact that commodity trades, particularly for oil and products, are generally denominated in US dollars. With the dollar as the de facto global reserve currency, the effect of sanctions intended to address a bilateral matter can quickly ripple out into a variety of other markets. In addition, secondary sanctions rooted in the preeminence of the U.S. dollar incentivize foes and allies alike to try and develop workarounds to reduce dependence on the dollar, which would ultimately accrue to Washington's strategic detriment. In short, energy sanctions are a blunt tool that exerts real market distorting effects and, arguably, is being overused and may undermine the goals they are supposed to serve.

History Shows That Misapplied (or Overused) Energy Sanctions Risk Undermining Long-Term U.S. Policy Objectives

By placing sanctions crosshairs upon a broad range of physical and financial actions on a nearly-completed NS2 pipeline project, the State Department's July 2020 position change is stimulating significant opposition in the EU political establishment. Coming in the wake of unilateral U.S. actions toward Iran that negatively affected EU interests, the NS2 decision also raises the risk that firms working on the project and their home governments may find a collective will to defy unilaterally imposed U.S. sanctions that ultimately exceeds Washington's appetite to absorb the commercial, diplomatic, and strategic costs of enforcing them.

We've been here before. In 1982, the U.S. had a diplomatic standoff with a group of its NATO allies, led by France, Germany, and the UK over the sanctions Washington imposed on firms providing equipment and technological support for a large gas pipeline the Soviet Union was constructing from Western Siberia to Western Europe.[10] President Reagan imposed sanctions in June 1982 that prohibited U.S. firms from selling various oil & gas-related technologies to the Soviet Union and also banned European firms from selling to the Soviets products produced under license from U.S firms.[11]

But only 5 months later, the Reagan Administration lifted the sanctions. While the President cast the retraction as the product of multilateral negotiations, evidence points toward a unilateral retreat in the face of concerted opposition from key European allies and the fact that as West German Chancellor Schmidt noted in this Brief's opening quote, the pipeline would be built whether or not the Americans wanted it. Indeed, Martin S. Feldstein, then chairman of the President's Council of Economic Advisors, admitted to the New York Times that "*'I think we have inflicted some pain, but we were also creating some side effects for our allies and ourselves so it was an inefficient way to penalize the Russians. We were hurting the allies and ourselves*."[12]

A key lesson of 1982 was thus that aggressive sanction actions which disproportionately affect a core European interest are at an elevated risk of failure. Put simply, the closer sanctions get to the core markets

of firms based in (and important to) U.S. diplomatic and security partners, the higher the risk that the resulting backlash impairs the achievement of broader security objectives (such as containment of malign Russian influence in Europe).

Consider the following examples, one of which involved a European firm (and home government) that accepted sanctions and the other of which is unfolding now, but will culminate in a strong challenge—and likely, rejection of—Washington's desired approach. When UK-domiciled Standard Chartered Bank was fined by the U.S. Justice Department for transactions in its Dubai branch that violated U.S. sanctions against Iran, the effects on bilateral relations were minimal.[13] But when a German port operator is told to cease and desist from provisioning vessels (1) involved in constructing a pipeline that has been in process for years, (2) approved by the company's home government as a priority energy security project, and (3) that now sits almost within sight of its facilities, lest it face "potentially fatal measures," multiple European governments are likely to view the U.S. actions as illegitimate and bandwagon against it.[14]

The manner in which sanctions are being threatened thus far against certain NS2 project participants may also undermine the measures' long-term credibility. U.S. officials' first targets for the cease and desist part of the campaign have been entities such as Allseas, Fährhafen Sassnitz GmbH, and Mukran Port. Each of these firms is locally important in Europe, but none of them have a major U.S. nexus, so banning them from the U.S. commercial and financial systems does not inflict much, if any pain on influential constituencies Stateside.

That, however, will not be the case with the major financial participants in the NS-2 project. For instance, Royal Dutch Shell has thousands of U.S.-based employees, major operations all over the country, and generates nearly ¼ of its gross revenues in the U.S. Likewise, BASF (which holds 67% of the shares in Wintershall Dea, a co-financier of NS-2) has massive U.S. operations.[15]

For them, facing sanctions-related consequences would be unpalatable, but would also potentially disturb influential domestic economic interests in the U.S. The pathways along which this could play out remains unclear at the corporate level—with some project participants such as Uniper suggesting they may have to withdraw.[16] They are also unclear at the political level, where Washington may yet change its approach based on lobbying from European capitals—or potentially, even Moscow.

Concerted diplomatic opposition that emboldens private actors could potentially rapidly undermine the sanctions by creating an unbalanced situation of uncertainty about whether strategic pressure will pay off versus more certain domestic political blowback.[17]

But there are better ways forward.

Just as the prospect of pushback from important corporate and governmental players will likely attenuate certain NS2 related sanctions activity by the U.S. (albeit after much diplomatic damage has already been done), so too can greater gas fungibility of gas supplies deter Moscow from weaponizing supplies during a time of acute crisis.

The political and economic costs of sanctions are magnified in an economic recovery environment such as that which the world will enter into as the coronavirus pandemic recedes. Sanctions aim to punish and isolate in order to push the target countries toward less destructive paths. This works in some cases, but generally speaking, it will likely be more effective--and far more sustainable--to shape certain countries' actions by leveraging market forces. This is precisely what a geoeconomics-based approach is all about: simultaneously facilitating movement toward economic and geo-strategic goals by harnessing market forces rather than acting in opposition to them, as sanctions frequently do.

In this context, geoeconomics would focus especially closely on the gas market and emphasize "*investments in strategic gas import infrastructure as a way to help surmount the barriers currently posed by local political-economic structures, friction between national security and commercial priorities, and the EU's lack of authority to effectively and directly impose gas market reforms within member states*."[18] This approach maximizes governments' range of policy options when confronting energy-focused geostrategic contingencies.

Gas Geoeconomics Sidestep Energy Sanctions' Downside

Excessive use of energy-focused sanctions undermines the sanctioners' energy and national security in several ways. First, just like bacteria repeatedly assaulted with antibiotics, sanctioned countries can develop workarounds that allow them to become resistant. Consider Russia's adaptations to the sanctions imposed on it by the US and EU after Moscow's 2014 invasion of Crimea. Sanctions have pressured Russia's ability to develop oil reserves in the Arctic and shale. However, production from existing resources hasn't stalled nor has it diminished. In opposite, Russia has gravitated more toward OPEC and became one of the major pillars of oil pricing as part of OPEC+, helping to set the stage for the current oil price war.

Sanctions have also largely failed to achieve their objectives on the natural gas front. China has helped finance the Yamal LNG project and gained a significant equity stake through doing so. In the meantime, China's appetite for overland gas supplies - encouraged by trade disputes with the U.S. which cast shadow at long-term security of U.S. LNG deliveries - underpinned the Power of Siberia pipeline, which entered service in December 2019.[19]

Second, sanctions that are imposed unilaterally or by a narrow coalition can create diplomatic divisions on issues that are fundamentally of common interest—as explained in the discussion above on the NS2 conflict. [20] Such divisions can in turn be exploited by the country(ies) whose core interests are often diametrically opposed to those of both the sanctioner and the affected third-party partner states.

It would likely be far more effective to adopt an approach that is "molecule indifferent" and accepts supplies from multiple locations, aiming only to build barriers against the use of energy as a coercive instrument. As the authors have previously written: "*Whether the gas comes from the U.S. Gulf Coast, Qatar, Norway, or Russia-based LNG producers, it builds a deeper and more flexible gas supply portfolio for Europe. The "credible threat" of alternative supplies deliverable on short notice can offset any single supplier's ability to coerce European gas consumers*." [21]

Exhibit 2: Energy Sanctions vs. Gas Geoeconomics

	Energy Sanctions	Gas Geoeconomics
Require Enforcement	Yes	No
Target Specific Countries/Companies	Yes	No
Can be neutralized with adaptive countermeasures	Yes	No
Source of diplomatic friction with allies	Sometimes	No
Incentivize negative bandwagoning against the U.S.	Yes	No
Deepen market integration and enhance resilience	No	Yes
Can force Russian gas suppliers to compete with each other in European market?	No	Yes
Can systematically cap a gas exporter's rent generation potential?	No	Yes
Can systematically curtail a gas exporter's ability to coerce importers?	No	Yes

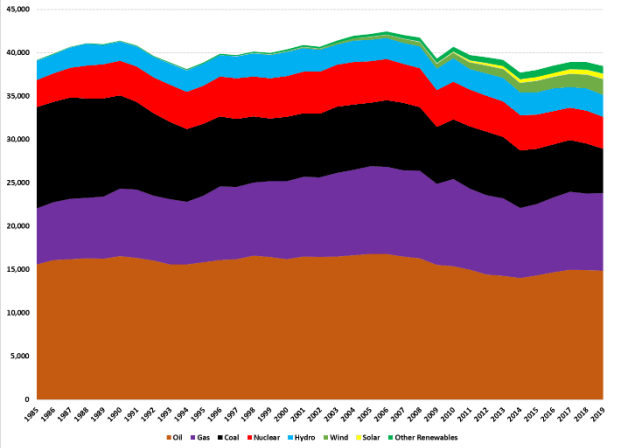
Greater interchangeability of gas supplies throughout the European Continent facilitated by a gas geoeconomics strategy can also cap Russia's longer-term inframarginal rents from gas sales into Europe, thus maximizing affordability and choice of gas supplies for consumers. Consider, for instance, the trend in natural gas pricing in Europe as the continent's primary energy source balance evolves while the U.S. and other major producers unleash new flows of gas molecules that diversify the global gas marketplace away from Russian supplies, especially for importers with access to seaborne liquefied natural gas (LNG) shipments.

Natural gas has accounted for an average of approximately 23% of Europe's primary energy use over the past decade, with little deviation. As coal and nuclear facilities continues to be retired in many parts of Europe, gas will remain important for underpinning reliable electricity supplies—particularly as intermittent renewables like wind and solar come to comprise a larger portion of the Continent's power generation capacity and particularly in the post-Soviet bloc where gas is often seen as viable decarbonization option versus coal use for either current demand or future demand growth.

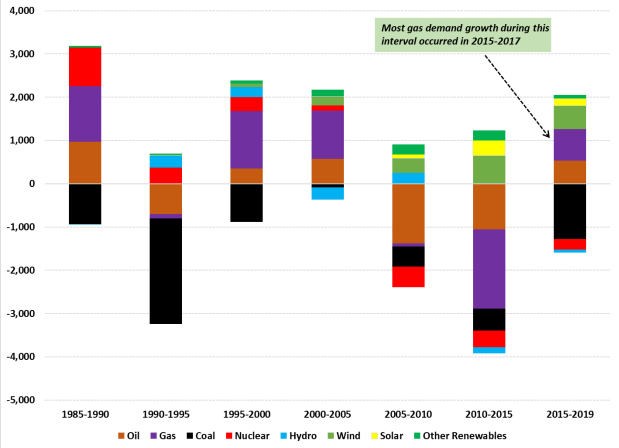
Exhibit 3: Europe Primary Energy Use Gradually Declining, But Gas Remains Important (Million tonnes of oil equivalent)

A Million Tonnes of Oil Equivalent is Approximately the Annual Fuel Use of 1 Million Sedans Driving 12,000 Miles Per Year Each

Primary Energy Use by Source



Incremental Change Since 1985, 5-Yr Intervals



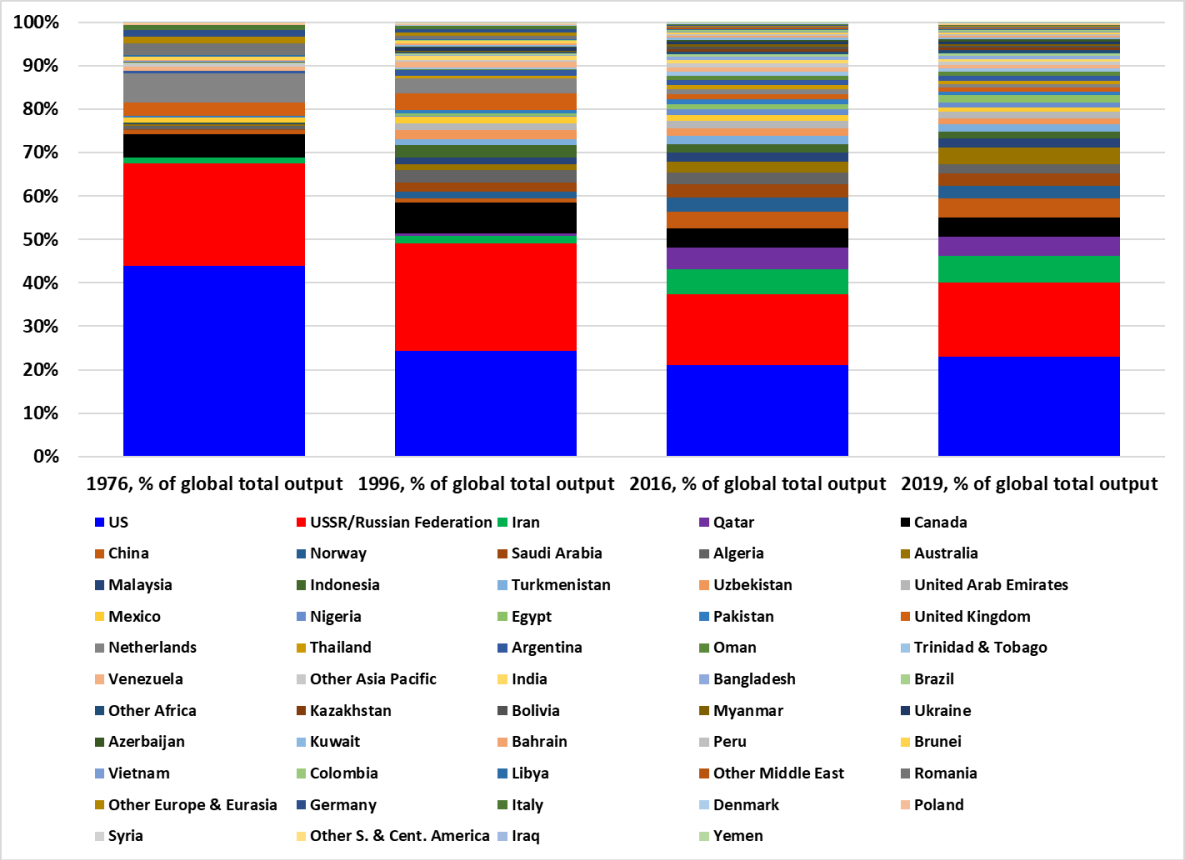
Source: BP Statistical Review of World Energy 2020, Authors' Analysis

Stagnant to declining energy demand combined with abundant gas supplies from multiple global suppliers—including baseload producers like Russia and newer LNG entrants such as Qatar and now the U.S—is likely to ensure abundant global gas supplies for a long time to come. Availability of molecules is a key pre-condition for successful implementation of a gas geoeconomics strategy that builds connectivity and harnesses market forces to pressure the Kremlin by bringing these gas supplies into Europe (or have the credible threat that they are "just over the horizon"), as opposed to over-relying on punitive energy sanctions.

Four decades ago, Russia and the U.S. collectively accounted for 2/3 of global gas production (although the U.S. was not a significant exporter). Now those two countries account for less than 40% of global gas output, and the U.S. has become one of the world's larger LNG exporters, able to move gas anywhere on the planet via seaborne shipments (**Exhibit 4**).

Note that between 1976 and 2019, global gas production increased from 118 billion cubic feet per day (bcf/d) to approximately 385 bcf/d—a 3.26 fold boost. The columns in Exhibit 4 become "messier" as one move to the right, toward the present date. That is not an accident, but rather an incident of the increasing ranks of global gas producers—many of whom are also seeking to access export markets. Even a small "slice" of the column for 2019 means a producer extracts sufficient volume to potentially support an LNG export facility if output exceeds domestic demand.

Exhibit 4: Global Gas Supply Diversification, 1976-2019 (% of total global supply)



Source: BP Statistical Review of World Energy 2020, Authors' Analysis

Policy Recommendations

Gas geoeconomics promotes market competitiveness and greater physical interconnectivity as a path to energy security, and in doing so, creates economic opportunities that encourage system participants to "buy in" rather than push back. Achieving these goals demands construction of physical gas supply and interconnection infrastructure to link suppliers and consumers together. It also requires them to concurrently incentivize and promote liberalization of gas markets so that one quasi-monopolist is not traded for another.

When it comes to deepening gas market integration the sequence of actions matters. Market liberalization initiatives must consider "on-the-ground" conditions, especially supply diversification, i.e. whether market points are physically connected to pipelines, LNG infrastructure, storage assets, and to one another. Infrastructure cannot be built in an institutional vacuum, lest existing vested interests capture it and stifle the very deepening of market connectivity the infrastructure was originally built to provide.

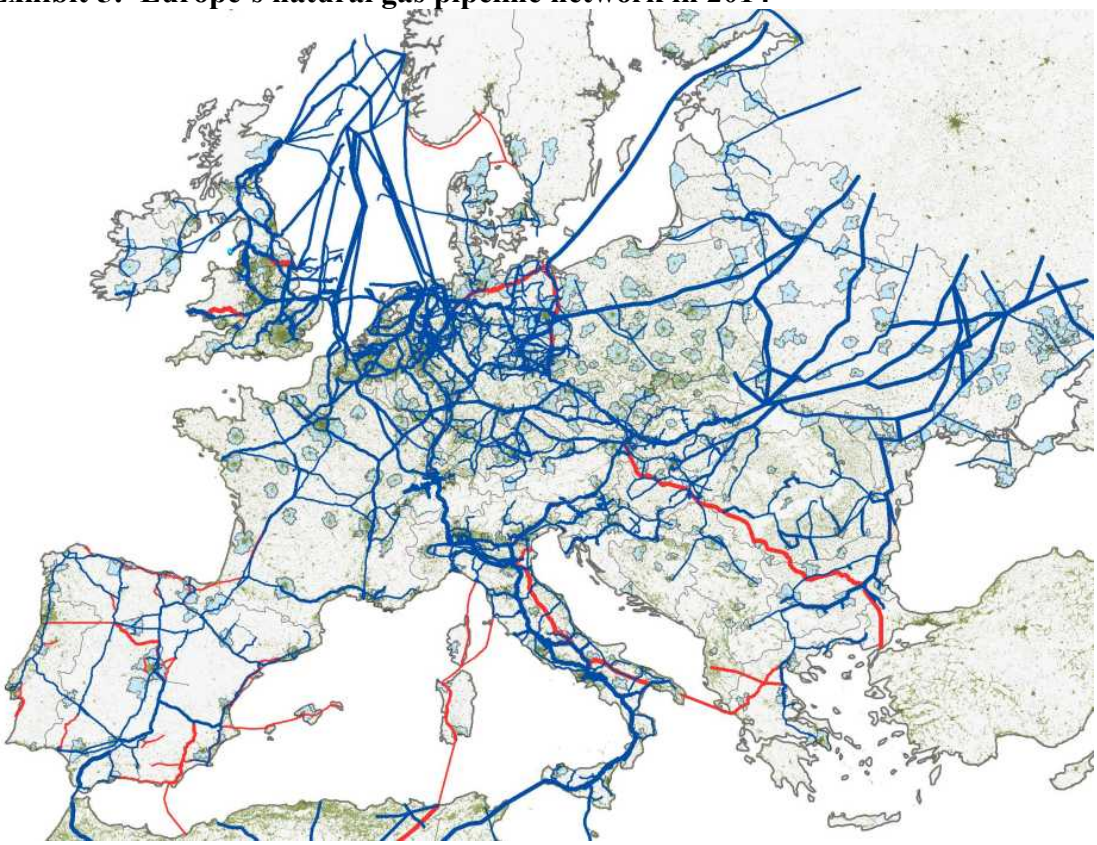
European geography and history also matter for gas infrastructure projects. Western European countries can generally access a diversified array of gas supplies from Russia, Algeria, Norway and -via LNG- other parts of the world, including the U.S. Western Europe also has ample storage and, with the exception of the Iberian Peninsula, is well interconnected, allowing supplies to be rapidly shifted in case of disruptions. Still market liberalization that has been advanced in the region within subsequent Energy Packages has been a welcome tool for ensuring competition within that market.

In contrast, the countries of Eastern and Central Europe have struggled to overcome the historical legacy of nearly complete dependence on Russian gas. Their situation has generally featured 1) a lack of connections to other sources of gas supply; 2) a lack of interconnections between markets within the region and with Western Europe; and 3) uni-directional (East-to-West) flow of gas via pipelines (See Exhibit 5, which shows the pipeline map of Europe in 2014 before diversification activities in the region accelerated). These dynamics enhance Moscow's ability to wield geopolitical and geoeconomic power against the region, as measured by higher prices for gas as well as attempts to influence national energy policies.[22]

Under such circumstances, a straightforward liberalization of the gas market would risk entrenching the power of the dominant gas supplier (Russia/Gazprom) while making market entry for other providers very difficult. To that point, regional policy makers, energy industry executives and energy experts have consistently emphasized to us that diversification of supply is a necessary (though not sufficient) condition for successful market liberalization.

Some of the push for supply diversification now underway [or recently completed] in Central and Eastern Europe includes: 1) enabling reverse flows in existing gas pipelines; 2) constructing new LNG import terminals (i.e. Swinoujscie in Poland, Klaipeda in Lithuania, and prospectively Krk in Croatia); 3) increasing access to non-Russian pipeline gas (Baltic Pipe from Norway); 4) building new pipeline interconnections (e.g. the Baltic Connector between Finland and Estonia that has been operating since January 2020, the *Gas Interconnector Poland-Lithuania (GIPL)* that is currently under construction, and expanding Poland-Ukraine gas interconnection; and 5) considering new storage options, including underutilized gas storage in Ukraine.

Exhibit 5: Europe's natural gas pipeline network in 2014



Existing pipelines (2014) in blue. Source: ETH Zurich[23]

The challenge is that gas infrastructure projects are very expensive, which introduced strong commercial dis-incentives for building key connections and import facilities motivated by energy security concerns.[24] Accordingly, varying degrees of governmental support are likely needed to achieve the goal of more complete gas supply diversification and market liberalization in the CEE region.

The EU has formally acknowledged the importance of diversification projects, with several being financially supported under the Connecting Europe Facility's initiative for Projects of Common Interest (PCI). Recent Russian behavior suggests the that additional U.S. assistance to accelerate existing EU efforts could yield strategic dividends. Moreover, targeted U.S. assistance can help compensate for the fact that the European Green Deal makes it more likely that future PCI investments will be split between renewables and gas. This is despite the fact that gas will be a critical fuel for decades to come in the CEE region as countries work to reduce coal use but still maintain reliable baseload power supplies with a larger quantity of intermittent renewable power coming onto regional grids.

Greater U.S. support through a gas geoeconomics policy would also help ensure a transparent source of funding to offset and deflect efforts by Gazprom to use financial backdooring to capture control over key energy infrastructure in Europe. Such capture can occur in very subtle ways--such as investments through non-Russian domiciled entities, "49.9%" ownership shares that mask Russian state involvement, or transactions designed to benefit politically influential members of a target country in Europe.[25] These measures can then operate unnoticed until a crisis occurs, at which point Moscow has a set of levers that would enable it to exercise influence in a way inimical to broader European energy supply security.

Within this context, U.S. financial support for interconnectors, additional pipelines, storage facilities, and other physical infrastructure could be an important element to work together with EU allies in ensuring that diversification of European markets proceeds contributing to closing the rift between European West and the post-Soviet world. Making U.S. help conditioned on recipient market jurisdictions implementing baseline criteria of market liberalization as diversification proceeds does not only follow the U.S.' traditional commitment to competitive free markets but also EU's goals in this regard as expressed in the Third Energy Package. **Also, any financial support for strategically important gas infrastructure would be "molecule indifferent"—whether the gas passing through the system came from Norway, Qatar, Russia, the U.S., or another supplier would not matter. In fact, the primary precondition is that the system would be openly accessible to all freely tradable gas cargoes.** A secondary precondition would be that projects must be connected to pipeline networks capable of enabling transnational movement of gas.

Physical infrastructure projects can be facilitated through at least five legally viable financial support options:

Option 1: U.S.-backed "forgivable debt" to finance EU gas infrastructure projects. Provide loans backed by a consortium of interested countries to support time charters of FSRUs and construction of essential associated connective infrastructure to get gas into local pipeline networks. The project operator would pay no interest for the first 2 years of project operation and then pay a preferential interest rate, for instance LIBOR + 50 basis points. **If within a pre-negotiated time frame the host country adopted and implemented reforms aimed at fostering gas market liberalization, the debt could be forgiven**. Implementation could be measured on the basis of a number of metrics, including, but not limited to: (1) lifting price controls; (2) physical unbundling of gas production, storage, and transmission infrastructure; (3) the emergence of verified, market-based trading of pipeline capacity; (4) verified, non-discriminatory third-party access by non-Russian controlled entities to gas pipelines in the country; and (5) trading turnover rates at virtual transfer points or gas hubs associated with the host country's gas pipeline network

Option 2: Directly finance strategic gas import and transport projects; Reimburse FSRU Vessel Charter and Operating Costs. In this case, construction firms would competitively bid for pipeline and associated infrastructure projects. For pipelines and infrastructure supporting LNG terminals' connectivity to the pipeline system, direct finance could be done on a "two for one" monetary basis. For each U.S. dollar equivalent of investment or "in-kind" services supporting the project, the G20 consortium would provide two dollars of grant money. For FSRU charters, official financial support would be provided on the basis of a benchmark linked to a trailing 3-month average of charter rates for FSRU vessels of similar size operating under similar contract length. The charter re-imbursement would also need to be linked to a local or regional inflation index.

Option 3: U.S. government provides "assured payback" to private import project developers. The initial investments would be made with private capital, but if a mutually established rate of return target was not met within 5 years, U.S.-facilitated funds could be used to compensate the developers for the difference between actual returns and the minimum return negotiated at the project's inception.

Option 4: Capitalize on the fungibility of money. Other types of financial engagement, especially on the hard security front, could be designed to also facilitate desired gas geoeconomics outcomes. For instance, if a given country was originally slated to receive a certain amount of funds from a NATO/EU member(s) for military or hard security purposes, that amount could be increased by an additional sum tied to the investment of that amount of money in a gas supply diversification project. For instance, Country X that

was going to receive $100 million in "hard security" funding could instead get $200 million, provided that it invested the local currency equivalent of $100 million into LNG import facilities, interconnector pipelines, or other supply diversification activities. Contributions could be via financial or "in-kind" contributions, such as permitting assistance, tax breaks to local companies facilitating the projects, etc.

Option 5: Provide preferential project finance loans. This could be done (at LIBOR or LIBOR + 50 basis points and/or, by allowing U.S. and EU-affiliated financial institutions to take a larger lending role than is typically the case. Such an approach could be especially useful for projects aimed at initiating the liberalization process in a particular country and showing capital markets that the jurisdiction is being "de-risked" from a gas sector investment perspective.

The five basic options outlined above generally comply with the WTO's prohibition of subsidies that are contingent upon export performance.[1] Such subsidies are designed to incentivize or promote exports that might not otherwise have happened. Each option detailed here is designed not to promote exports of a specific country, but rather, to promote a more diverse array of gas imports into Europe.

Invest Concurrently in Strengthening Political and Institutional Infrastructure to Facilitate Market Liberalization

Liberalization of markets has been a cornerstone of transparency and competitiveness. But under conditions of limited infrastructure and lack of access to the market by diverse suppliers it can actually have opposite results: lead to monopolization of the market. Thus, in places like Central and Eastern Europe, for example, where historically gas infrastructure has been built to serve only the Russian supplier, there is a need for infrastructure buildup and supplier diversification before meaningful market liberalization takes place. As many of long-term contracts with Russia are expiring in early- to mid-2020s, the need for infrastructure is immediate.

With new infrastructure in place or in the process of being built, countries gain a stronger bargaining position vis-a-vis Gazprom. With Russia no longer able to dictate the conditions of new contracts (price, contract flexibility, indexing etc), liberalization of the market can follow. The EU regulations (i.e. Third Energy Package/Unbundling Principle) are well suited to foster both diversification and liberalization. By implementing a meaningful schedule for liberalization, governments will give an important signal to market participants generating interest and, potentially, future contracts. These plans need to include a schedule of liberalization of the access to pipeline capacity, storage and natural gas exchange. As such, EU law can also limit instances when exceptions are allowed to protect competition and/or non-competitive markets.

The U.S. can play a lead role in facilitating diversification/liberalization efforts. Funding and financing new infrastructure can, for example, ensure that it will be built. This is crucial as such infrastructure may, at least at first, not be economical from the narrow market perspective, i.e. LNG terminals may be underutilized as Russian gas is likely to compete and outcompete LNG supplies in terms of price. However, this is precisely the value even an underused gas infrastructure will have in Central and eastern Europe- it creates a more competitive environment and enhances consumer choice and security of supply.

Such approach contrasts with the sanction regime that is likely to increase the tensions between US allies in Western Europe, which – given their liberalized and diversified markets- often see the project as a commercial venture and U.S. actions as intervening with their sovereign rights to pursue their economic interests. Sanctions can also increase the rift between Western Europe and the post-Soviet bloc, as the latter – in the view of its historical experience and still not well diversified gas market - see NS2 and Russian gas in general as Russia geopolitical tool. In contrast, geoeconomic approach provides a common EU-US

[1] "Agreement on Subsidies and Countervailing Measures ("SCM Agreement")," World Trade Organization, https://www.wto.org/english/tratop_e/scm_e/subs_e.htm

goal toward gas market liberalization and increasing energy security while contributing to diminishing the rift in gas market diversification that still exists between Europe's "West" and "East."

Increasing Congressional Acceptance of Gas Geoeconomics Concept

Gas geoeconomics concepts are being increasingly accepted by both houses of Congress and in a bi-partisan manner. In April 2018, the authors published their working paper titled "*Gas Geoeconomics in Europe: Using Strategic Investments to Promote Market Liberalization, Counterbalance Russian Revanchism, and Enhance European Energy Security*." By October 2018, Sen. Chris Murphy (D-CT) introduced Senate Bill 3585, the "*European Energy Security and Diversification Act of 2018*," whose core content tracked the authors' novel gas geoeconomics policy concepts almost word for word and country by county.[26]

The 2018 bill evolved into Senate Bill 704 ("European Energy Security and Diversification Act of 2019") and H.R.1616 (introduced by Rep. Kinzinger, R-IL) its House companion bill which passed by a vote of 391-24. The bill has been received in the Senate, read twice, and referred to the Committee on Foreign Relations.[27] Current events strongly suggest it is time to re-animate the legislative process to secure political support, personnel, and funds to begin implementing a gas geoeconomics approach.

The world is broadly moving in a more nationalistic direction. Yet markets will for the foreseeable future offer the single most sustainable and scalable path to energy security. The natural gas sector in particular offers a range of engagement points where national government can engage with partner countries to improve the physical and institutional infrastructure in order to maximally leverage market forces and commensurately reduce certain suppliers' ability to use gas supplies as a potential tool of geopolitical coercion.

Over the next decade, Central and Eastern Europe offer particularly fertile ground for interested countries to partner with the United States and more fully implement gas geoeconomics policies that enhance energy security, solidify market liberalization, and also reduce emissions by maximizing the use of clean-burning natural gas. All three items are—or should be—core U.S. policy interests can be advanced at an affordable capital cost.

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