

Gas, Carrot and Stick Approach: Nord Stream 2, European Union, Transatlantic Partnership and African Alternatives

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Abstract

With the successful completion of the first string of Nord Stream 2, June 2021, the long-delayed pipeline project finally comes on stream. Nord Stream 2 pipeline sucks in diverse interests, generates controversies, provokes criticisms, and creates uncertainties among its many stakeholders. From Russia to the Baltic region to the EU, the US and Africa, the pipeline offers different realities; illusion, vulnerability, pragmatic nationalism, political conservatism, and economic development prospect. But, why is Nord Stream 2 intensely controversial? What strategic calculations and interests inform stakeholders' engagements with the pipeline project? This study seeks to provide a critical contextualisation of Nord Stream 2 in a thorough synthesis of extant literature. The paper argues that Nord Stream 2 is a geo-political and geo-economic energy infrastructure, with the different stakeholders involved in the project deploying a continuum of instruments and approaches in furtherance of a foreign policy issue. The study concludes that Nord Stream 2 will have strategic implication for EU's energy policy, significantly frustrate transatlantic partnership, and undermine the prospect of increased Africa's gas export to Europe.

Keywords: Africa, energy security, european union, Nord Stream 2, Russia, transatlantic partnership

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Introduction

No pipeline has generated as much controversy as the Nord Stream 2. Otherwise known as the Baltic Sea pipeline, Nord Stream 2 is defined by a convergence of diverse interests and stakeholders, high-wire, classical geopolitics, and energy security permutations. The pipeline is as much an economic enterprise as it is a geo-political project (Schmitt, 2021). It is reminiscent of cold war politics, unpacks decades-old alliance system, divisive in practicability, and highlights different economic realities especially in Europe. Expected to be operational in late 2021 following the completion of string 1 of the project, Nord Stream 2 will run alongside the already constructed Nord Stream 1 and will double the volume of gas being piped to Europe (Gazprom, 2021). Expectedly, the pipeline will ensure sustainable gas supply to Europe while providing Russia unfettered direct access to European gas market (Westphal, 2021). However, the fractured relationship between Russia and the West especially in the wake of Russian annexation of Crimea in 2014 and the poisoning of Russian opposition leader and anti-corruption activist Alexei Navalny on August 20, 2020, has heightened European scepticism about the project and the reliability of Russia in meeting her gas obligations (EU Parliament Resolution, 2021; Ellyatt, 2020). Nord Stream 2 is pivotal to Europe energy security, it is nonetheless a proxy for Russian hybrid warfare (Ratsiborynska, 2018).

Though the first string of the pipeline was successfully completed in June, concerns over security, environment and geopolitics remain (Russell, 2021). The core concern for Germany, Europe's biggest natural gas consumer, centres around the country's dependence on Russian energy, which could make her susceptible to external pressure and manipulation and the environmental impact of the project which has been vociferously articulated by the German Green Party. But Angela Merkel is quick to dismiss such security and environmental risks, maintaining that Nord Stream 2 is a diversification and long-term economic survival strategy for Germany (Westphal, 2021). Ukraine has got some reservations, too, but its unique location as Russia's gatekeeper to the EU gas market gave it a geostrategic advantage. By 2017, about 40% of Europe's gas consumption

was piped from Russia through Ukraine, with Kiev generating between \$2-3billion (3% of GDP) in transit fees annually from its role as a “middle-man” (Cohen, 2018). Attempting to bypass Ukraine which Nord Stream 2 seeks to achieve, amounts to weakening substantial geopolitical and economic leverage which Ukraine enjoys. Ending gas transit could considerably reduce Ukraine’s gross domestic product (GDP) (EU Parliament Resolution, 2021). As much as there are concerns of Nordic security because the 1,230 kilometre pipeline criss-crosses the territorial waters and Exclusive Economic Zones (EEZ) of Finland, Sweden and Denmark, the project offers significant mutual economic benefits. By December 2018, collectively, Finland, Sweden and Denmark had received 832 million euros in direct investment from Nord Stream 2, rising from 388 million euros in the previous year (Kruse & Berkahn, 2019). The pipeline is also fuelling worries in the U.S. and other countries that may be subjected to Kremlin’s pressure upon successful completion. Despite U.S. sanctions that halted construction for a year, Nord Stream 2 is finally on stream (Langrock, 2021). U.S. reaction may, however, not be unconnected with her resolve to contain further Russian leverage on the EU while growing her share of the continent’s gas imports. Accordingly, U.S. economic sanctions against Nord Stream 2 is partly a containment strategy, reminiscent of the cold war. The project touches on sensitive interests in many quarters, and differs widely among EU countries. Though a commercial venture, Nord Stream 2 will have high political and geostrategic costs, as well as present a challenge for energy diplomacy.

Within a regional and transatlantic context, this present undertaking critically examines the implication of the Baltic Sea pipeline. Successful completion of pipe laying for the first line of the project in June 2021, justifies a re-examination of the issues and concerns around the project. In this regard, the focus is whether the European Union’s energy security is promoted or Russian leverage on the Union is enhanced as a consequence of this new development, and the implication of the pipeline project for transatlantic partnership and alternative African gas markets. The latter consideration comes on the back of continuing Africa’s gas exports to the

EU through pipeline infrastructure, but there is a reasonable prospect of stagnation as a result of increased Russian gas supply to the EU through Nord Stream 2 despite emerging Russia-Africa energy rapprochement which is seen in accelerated Russian gas investments in Ghana, Mozambique, and other parts of Africa. In addition, political and economic challenges along Africa's gas corridors combine to frustrate the continent's capacity as a viable potential and real gas supplier to the EU. As it stands, the pipeline has morphed into an issue bogged down by a continuum of strategic interests and countervailing measures, carrot and stick approach, and soft and hard power diplomacy. Over all, the implication of Nord Stream 2 for Europe, U.S., transatlantic partnership, and Africa can be fully appreciated within the context of Europe's energy consumption mix.

Conceptual Clarification

A brief description of key concepts, such as Nord Stream, Nord Stream 2, and TurkStream (including TurkStream 2) is critical to a better appreciation of the focus of the study. It is important to note that these "streams" are gas pipelines connecting Russian gas fields with European gas markets, through different corridors. Nord Stream 2, as noted in subsequent sections of the study, is a pair of 1,230 kilometres (764-mile) pipelines that would transport natural gas from Ust-Luga, Russia to Greifswald, Germany through the Black Sea (See figure 1). Collectively known as Nord Stream 2, the two pipelines are expected to transport 55 bcm every year, double the capacity of the existing undersea route (the original Nord Stream), completed in 2012. The pipeline is expected to run alongside the already constructed Nord Stream. Like Nord Stream 2, Nord Stream also runs from Russia, Portovya Bay near Vyborg to Lubmin near Greifswald, Germany, through the Baltic Sea, with an annual capacity of 55 billion cubic metres of gas. Gazprom holds a majority stake (51%) in Nord Stream AG, the company handling the construction and operation of Nord Stream projects (Gazprom, 2021).

TurkStream (otherwise known as Turkish Stream) is a pipeline project connecting Russia with Turkey through the Black Sea. The pipeline project,

Russia's southern pipeline to Europe, includes both onshore (180km) and offshore components (910km) (Turk Stream, 2021). The first of the pipeline's two strings is destined for Turkey, while the second line delivers gas to southern and southeastern Europe, with each of the strings having the capacity to deliver 15.75 billion cubic meters per year (a combined 31.5 bcm per year). The TurkStream delivers gas to Bulgaria, Serbia, and Hungary (Turk Stream, 2021).

Europe's Gas Dependence: A Critical Overview

EU energy consumption comes from two sources; domestic production and imports. In 2019, 31% of EU energy consumption came from internal sources, while 61% was external (Eurostat, 2020). Of that mix, petroleum products accounted for 36%, while natural gas and renewable energy had 22% and 15%, respectively. During same period, nuclear energy contributed 13% to EU energy consumption mix, while solid fossil fuels recorded 13% (Eurostat, 2020). However, the shares of the different energy sources in the overall energy mix varied considerably between member states. Natural gas accounts for about a quarter of EU's primary energy mix and it's the second-largest energy source in Western Europe. In 2019, total EU gas imports by pipeline stood at 237.0 bcm, as against 211.3 bcm in 2020 (British Petroleum, 2021). The decline in EU gas imports in 2020, falling by over 8%, may not be unconnected with COVID-19 as the pandemic had a troubling impact on the global economy, including global energy markets. In 2020, Russia was the largest supplier of natural gas to the EU, accounting for 45.5% of the economic blocs' natural gas consumption, followed by Norway, Algeria, and Qatar with 22.7%, 11.6%, and 6.1%, respectively (Eurostat, 2021). LNG imports to the EU enjoyed a sizeable share of roughly 18% (Eurostat, 2021). The five biggest consumer nations in the EU in 2020 were: Germany with 86.5 bcm, Italy with 67.7 bcm, France with 40.7 bcm, the Netherlands with 36.6 bcm, and Spain with 32.4 bcm (British Petroleum, 2021). Stagnating indigenous production couple with increasing consumption, driven primarily by the electricity generation sector and households, have heightened the need for increased

importation (IEA, 2020). With Norway seeking to expand its oil and gas production capacity in a new policy shift (Adomaitris, 2020), the EU may well have found a more reliable gas source in the Scandinavia. However, it will take a while before a marked policy departure commitment begin to yield expected outcomes.

There are a few other alternatives to the natural gas supplies from Russia. These include Nigeria, Algeria, Norway, the Caspian and Central Asia. Increasing imports from any of these alternatives would be a costly endeavour requiring huge investment in pipeline infrastructure because of internal and external political and economic constraints. Algeria's gas production is stagnating following a period of rapid growth from the second half of the 1990s, and coincides with increased domestic consumption of gas (Ouki, 2019). Hence, its capacity for export is seriously undermined. Russia, through long term contracts with Kazakhstan and Turkmenistan, is practically the sole outlet for Central Asian gas to Europe, though China's incursion into the region is undermining Kremlin's hold and influence across Central Asia (Pirani, 2019). Such lopsided contractual arrangements coupled with subservient policy measures are employed by Russia to counteract independent European access to Caspian energy. In the near term, therefore, EU's consumption of natural gas will rise, and the union will look increasingly further afield to Russia to meet this need. From a practical point of view, the diversification of gas imports is constrained by the fact that the lion's share of imports (85%) comes via pipelines, a contractual arrangement which tie up both the supply and the demand side for years in advance. In a situation of high energy prices and a seller's market, the EU is obviously in a weaker position, regardless of how gas prices are indexed under the long-term supply contracts (Kavalov et al, 2009). Altogether, these facts and trends are exerting growing pressure on the EU, and Kremlin's energy assertiveness in the EU is expected to increase with the successful completion of ongoing pipeline projects, such as Nord Stream 2 and Turk Stream.

However, increasing EU reliance on LNG imports from the United States may pose a threat to Russia's dominance of the EU gas market, at

least in the long run. For now, the concern is the extent to which U.S. LNG will compete against Russia's gas to maintain their market share of EU gas market and to avoid driving price too low. U.S. quest to expand her share of EU gas imports does provide significant insights on why the country is paying so much attention to developments around Nord Stream 2. As the paper shall point out, economics of gas is a crucial element in transatlantic relations, and an important driver of US-Russia gas dispute, with the EU energy dependence providing a vista for "cold war" politics. Washington-Kremlin rivalry is further strengthened by the latter's proclivity to use its natural resource as a malign tool to undermine national leadership, create social upheaval, and effect regime change in a target country. Russia's annexation of Crimea between February and March 2014 was driven by Kremlin's desire to cripple Ukraine's gas diversification strategy anchored on Crimean's 4-13 trillion cm estimated gas deposit (Umbach, 2014). Such aggressive geo-strategic moves are implicated in the complicated relationship between the US and Russia. For now, a highly gas thirsty and dependent Europe is a beautiful bride of Russia and the US, two key gas exporters keen on maintaining, and possibly expanding their gas strongholds in Europe, either by "carrot" or "stick," or a combination of both.

Russia's Gas Exports to the EU and the Troubled Russian-Ukraine Corridor

The EU is a major market for Russian gas, with 40% of the bloc's gas imports from Russia transported through pipelines that cross Ukraine (Pifer, 2021). However, there have been increasing concerns over Russia's reliability as an energy exporter since the 2006 gas dispute with Ukraine, which resulted in Russia cutting off gas shipments to Ukraine and Ukraine siphoning off Russian gas destined for Europe (Hubert & Irina, 2009). Russia had sought a higher gas price in the new supply contracts, which Ukraine rejected. The development resulted in a temporary mid-winter interruption in the EU gas supply, only for deliveries to resume after Russia had warped under immense pressure from Western Europe.

The hope that Western Europe could remain undamaged from the conflict about gas transportation was shattered in January 2009. Like the 2006 gas crisis, the parties in the January 2009 hostility became so ingrained that Russia stopped the supply of gas completely to prevent Ukraine from using the gas supplies destined for Western Europe to supplement its own reduction in supply, but the southeast European countries which have no alternative supply routes available to them were badly hit by the crisis (Kovacevic, 2009). The impact of the conflict on the northern countries was less pronounced because, among others, they receive a share of their gas imports from the Yamal pipeline through Belorussia (Belarus) and Poland (Pirani et al., 2009). However this route is also by no means secure. After the completion of the Yamal pipeline, relations between Russia and Belarus deteriorated considerably, and like Ukraine, Belarus also resisted any adjustment of its import prices up to the international level (Kovacevic, 2009). When Belarus diverted gas from transit pipeline in February 2004, Russia completely stopped supplies. Consequently, recipients located further to the west, especially Poland, Germany and Russian enclave of Kaliningrad were cut off completely before the crisis was resolved (Pirani et al., 2009). There have been gas disputes between Russia and Belarus since then; in 2016 and 2020.

Both transit states, the Ukraine and Belarus, have abused their strategic positions in the transport system in order to get significant concessions with regard to their own gas imports (Hubert & Irina, 2009). Hence more than a quarter of the gas export profits have flown in the past as rents to the transit countries due to their strategic position in the existing transport system (Balmaceda, 2013). Such a burden on the transit system has reduced the willingness to invest in the development of new gas fields and is also shared in the long term by the consumers in Europe in the form of higher prices for Russian gas. Against this backdrop, the construction of Nord Stream 2, bypassing existing transit corridors is seen as a way of checking incessant crisis along the transit routes and undue influence of the transit states.

Again, in 2014, another gas dispute erupted. On 16 June Russia had turned off gas supply, after complaining that Ukraine had failed to pay off its debts, estimated at \$5.3 billion (Reuters, 2014). The crisis was complicated by the invasion of Crimea same year. Ukraine responded by embarking on a reverse flow supply from neighbouring EU countries, namely Slovakia, Poland, and Hungary (Kirby, 2014). Though Russian gas, these imports are purchased from traders on the market. Despite tense legal and political relations and construction of “bypasses,” Ukraine remains an important export route for Russian gas to Europe. Though Gazprom is seeking to lower its reliance on Ukraine to transport its gas to Europe, coming on the back of a new five-year gas transmission agreement whose negotiation was facilitated by the EU Commission, and accelerated by the imposition of U.S. sanctions on Nord Stream 2 (see details below), Ukraine will earn \$7 billion in revenue as a transit state in the next five years (Bloomberg, 2020). Russia had earlier proposed a one-year gas agreement with Ukraine following the expiration of the last agreement in December 2019, instead of five years eventually agreed on (Pirani & Sharples, 2020). Russia’s earlier stand should be seen as a time-buying strategy to see Nord Stream 2 and Turk Stream become fully operational before Gazprom finally end gas transit via Ukraine. The economic consequences of a near end to Ukraine’s strategic position viz-a-viz Russia’s gas supply to Europe feeds into Moscow’s overarching plan to add Ukraine to its circuit. Nord Stream 2 could contribute to the isolation of Ukraine from potential European allies and make it more vulnerable to Russian aggression. Long term economic viability of Ukraine will depend on the outcome of the resolution of the gas dispute. While it looks likely that the US will concede to successful completion of the pipeline project, the faith of Ukraine hangs in the balance.

The Nord Stream 2 Pipeline

Nord Stream 2 (see Fig. 1), the largest offshore pipeline in the world (Kruse & Berkahn, 2019), is a pair of 1,230 kilometres (764-mile) pipelines

that would transport natural gas from Ust-Luga, Russia to Greifswald, Germany through the Black Sea (Gazprom, 2021). Collectively known as Nord Stream 2, the two pipelines are expected to transport 55 bcm every year, double the capacity of the existing undersea route (the original Nord Stream) which was completed in 2012, and they will pass through the Exclusive Economic Zones (EEZ) of five countries: Russia, Germany, Denmark, Finland, and Sweden, who have granted all permits necessary for construction (Gazprom, 2021).

The construction of Nord Stream 2 is being handled by Nord Stream 2 AG, a joint venture of five major international finance partners: Gazprom (Russia), Anglo-Dutch Shell (British/Dutch), Uniper and Wintershall Dea (Germany), Engie (French), OMV (Austria), with Gazprom providing 50% of the project funding (Gazprom, 2021). Upon completion, Nord Stream 2 would have gulped a whopping 9.5 billion euros (\$11.6 billion) (Nord Stream AG, 2021). Initially expected to begin operation late 2019, the project was frustrated by U.S. sanctions that stalled the pipe laying activities of Swiss contractor Allseas Group SA.



Fig. 1: Nord Stream 2. Source: Gazprom

Legal Context of Nord Stream 2

Though a subject of legal interpretations and debates especially regarding its status *viz-a-viz* EU's Third Party Package (TEP) and Gas Market Directive (as amended), Nord Stream 2 derives its basis from international conventions and treaties. Article 79 of the 1982 UN Convention on the Law of the Seas (UNCLOS) provides that "all States are entitled to lay submarine pipelines and cables on the continental shelf [of another state]" (UNCLOS, 1982). The coastal state may not hinder the laying of pipelines *per se*, but enjoys the prerogatives to ensure that "reasonable measures" are taken to protect the environment, and the demarcation of the pipeline "is subject to the consent of the coastal state" (UNCLOS, 1982).

In addition to UNCLOS, the Convention on Environmental Impact Assessment in a Transboundary Context, commonly known as the Espoo Convention, signed in Espoo, Finland in 1991 and entered into force in 1997, sets out an obligation to prepare an Environmental Impact Assessment (EIA) of any project "that is likely to cause a significant adverse transboundary impact, including large diameter oil and gas pipelines" (Espoo, 1991). The EIA, prepared by the Nord Stream 2 consortium, included "possible alternatives to the proposed activity, including a no-action alternative" (Espoo, 1991). In this regard, Nord Stream 2 AG submitted an application in 2019 to the Danish Energy Agency for the 175 kilometre-long alternative route passing through Danish EEZ to the north-west of Bornholm (Danish Energy Agency, 2020). Sweden, Finland, Denmark and Germany are referred to as Parties of Origin to the Espoo Convention, as the pipeline passes through their EEZs, but Russia is only a signatory power, not a party to the Convention. However, she took part in the EIA process. Construction permits were given by Parties of Origin following approval of the EIA procedures.

The Espoo Convention seeks to "ensure environmentally sound and sustainable development" (Espoo Convention, 1991) through the prevention, reduction and control of significant adverse transboundary environmental impacts from proposed activities. The Convention assumed that addressing environmental issues early in the planning

process through international cooperation will improve the project's final environmental performances. In its preamble the convention affirmed the "need to give explicit consideration to environmental factors at an early stage in the decision-making process..." (Espoo Convention, 1991). This position is also reinforced by the International Association for Impact Assessment (IAIA), which provides that the EIA process should be applied "as early as possible in decision making." (IAIA, 1999) to ensure that its objectives are met.

Nord Stream 2: Promoting Russian Leverage or EU's Energy Security?

Does the Baltic Sea pipeline promote EU's energy security or enhance Russian leverage over the Union? Expectedly, the Baltic Sea pipeline will reduce uncertainty in the EU market over the reliability of Russian gas supplies, allowing Russia to export its gas directly, and in greater volumes, to Europe (Gazprom, 2021). It will not only eliminate transit fees payable to Ukraine and Belarus, but also reduce Russia's dependence on those countries for gas exportation, to the economic benefit of both importer and exporter (Kruse & Berkahn, 2019). Moreover, as Russia invests billions in this pipeline, Kremlin will have strong incentives to keep it full and profitable (Bouwmeester & Oosterhaven, 2017). Transit fees from gas crossing through Eastern European countries will no longer be factored into the price that EU countries pay for gas, thereby making it cheaper (Kruse & Berkham, 2019). However, the countries of Central Europe, including Poland, the Czech Republic, Slovakia, and Hungary will lose some transit revenues that supplement their national incomes and strengthen their economies (Fischer, 2016; Bouwmeester & Oosterhaven, 2017). Overall, Nord Stream 2 will enhance EU's energy security, which is particularly advantageous to Germany because it would make Germany the primary distributor of Russian gas in Europe. In light of the installed total capacities of the project, even a complete breakdown of supply through the Ukraine and Belarus would barely have any consequences on the supply to north-west Europe. But the pipeline could also detract from long-term EU goals, including reducing reliance on hydrocarbons and

enhancing financial stability in the newer EU member states (European Parliament, 2021).

The pipeline will promote mutual dependence between the EU and Russia though, Western Europe's dependence on Russian imports will grow only to the extent that Nord Stream 2 supplies additional natural gas from Russia and not just redirects gas from other transit routes (Lang & Westphal, 2017). The pipeline would create, in fact, mutual dependence akin to a relationship between parties in a contractual commercial gas agreement. This argument is reinforced by the fact that unlike liquefied gas, natural gas cannot be transported to a destination other than the given pipeline (Stern, 2017). It is therefore possible that this interdependence might be used to enhance the EU's ability to secure greater Russian compliance with the rules and norms of the global energy market. The foregoing argument has implications for broader EU-Russian economic relations. Europe needs to deepen its economic relations with Russia in order to ensure amicable relations. The hymn should be "engage Russia" to create harmony. Nord Stream 2, from this stand point, should provide much needed platform for renewed economic rapprochement between the two parties, and hence, peaceful coexistence.

Nord Stream 2: "Gazpromizing" European Energy Security

Increased Russian gas export to Europe offers significant benefits, but there are more daunting negative consequences, such as greater "Gazpromization" of European gas market and lack of comparatively cost-effective energy market diversification, with the end result being increased Russian leverage over the EU. Furthermore, Moscow has demonstrated authoritarian and assertive posture in its domestic and foreign policies. Russia spearheaded the creation of a "gas-OPEC," which would include Iran and Turkmenistan. Such a cartel would control the world's first, second, and fourth largest gas reserves, which together house 73 percent of total natural gas reserves (Finon, 2007). This, no doubt, would have significant influence over the LNG market especially. Though the likelihood of a gas cartel in the mould of the Doha-based 12-country

Gas Exporting Countries Forum (GECF) being able to exercise control over all gas movements worldwide in a manner comparable to OPEC seems unrealistic due to the unique nature of the gas market and the inability of major gas producers to evolve a consensus price-setting institutional mechanism. For instance, two major gas exporters, US and Australia, are not GECF members, while Russia, Iran, and Venezuela, the remaining major gas exporters in the organisation, are currently burdened by US economic sanctions (Mammadov, 2019). Hence, the effectiveness of such a gas cartel is already seriously undermined. However, LNG market is vulnerable to manipulation; and could decide to prevent excess supply through delivery optimisation and use of destination clauses (Wagbara, 2007).

In times of shortages, Russia will have to prioritise among its consumers and choose between the larger states of the continent or the smaller states within the former Soviet territory with which Russia's relations are unsatisfactory. There are reasons to believe that states with strained relations with Russia will have to stand back in their imports of energy. This has been the case within the Baltic region and the Commonwealth of Independent States (CIS) (Hedenskog & Larsson, 2007). Practically speaking, this decreases the bargaining position of the EU-member states of Estonia, Latvia, Lithuania and Poland, but also Belarus and Ukraine vis-à-vis Russia. When the level of sensitivity and vulnerability of already weak members increases, this has at least two consequences. First, their interests in seeking alternative (non-Russian) fuel sources are boosted, i.e. they devote more interest to domestic fuel sources such as shale oil and coal, something that goes against the EU's ambition of decreasing usage of fossil fuels and non-renewable resources. For instance, Ukraine signed a \$10 billion (6 billion pounds) shale gas deal with Royal Dutch Shell in 2013 in a major step away from dependency on Russian gas imports (Zhdannikov, 2013). Secondly, when relatively weak states lose power vis-à-vis Russia, an actor that has previously acted coercively, their ability to act as security providers in the region is reduced (Zhdannikov, 2013). Nord Stream 2 improves Germany's rather than the EU's energy security, at least

as long as Germany has a cordial relationship with Russia. However, the project undermines energy security for several other members, which in turn undermines the EU's development towards becoming one united actor. Russia's inclination to put pressure on its neighbours in times of crises cannot be ruled out, as Russia has previously resorted to this practice – even against EU and NATO members (Lepesant, 2014; Adomeit, 2011).

Naturally, Russia's ability to control the gas flow will also increase with regard to states that depend on the pipeline; Germany, and possibly, the Netherlands, the UK, and Belgium. They might become more sensitive to Russian pressure. It is difficult to see them becoming vulnerable to the same extent as the weaker states of Eastern Europe. However, if there are technical possibilities for Russia to tamper with the flow of gas to individual states without affecting the supply to others, there are tangible threats to the importing states, especially when something happens to trigger a crisis. This does not seem to be an imminent problem, since Russia is keener on preserving good relations with these states than with those of the CIS or Eastern Europe. Nonetheless, Germany should not exaggerate its special role vis-à-vis Moscow. During the 2007 Russia-Belarus energy dispute, Russia cut some of the supplies to Belarus, which eventually also affected Germany. Russia had its reasons for cutting supplies, but it is noteworthy that Germany was not given any prior notice (Mammadov, 2020). Even without Nord Stream 2 Russia already provides as much as 40% of EU gas needs (see Eurostat, 2021) and once that goes online, increased dependency of EU on Russia with the attendant vulnerability of the bloc to Russia's blackmail is an instant reality. It is therefore not surprising that President Donald Trump described Germany as a "captive of Russia" at the 2018 NATO Summit in Brussels (Kluth, 2020).

It is true that Russia has traditionally been a reliable gas supplier to the "West" and therefore no need for Western Europe to be anxious about Russia's reliability (Stern, 2005). However, are not Estonia, Latvia, Lithuania and Poland parts of "the West" today? The new and prospective EU members have been targeted by aggressive Russian foreign policy to a greater extent than Western parts of Europe (Stern, 2009). Even the

slightest risk of having supplies cut for political reasons as in the Russia-Belarus gas dispute of 2010 intended to arm-twist President Alexander Lukashenko to join a new customs union led by Russia, moves the project into the security realm even for the EU. Without recognising the priorities and vulnerabilities of the new members, the EU loses legitimacy in its northern axis and the process of integration loses impetus (Stern, 2005).

United States and Nord Stream 2: Strategic Interests and Countervailing Measures

Why is the United States interested in Nord Stream 2? And how has successive U.S. governments responded to the project? The U.S. conceives of Nord Stream 2 as a geopolitical project (Blinken, 2021). Otherwise, as observed by energy policy makers in the U.S., the ideal would have been, at least from the standpoint of economic and commercial viability, to connect the pipeline to existing gas infrastructure that transit Ukraine, Belarus and Poland. As it turned out, the project would divert gas from existing gas pipelines especially from Russia's western neighbours thereby by-passing Ukraine and denying Kiev much needed revenue accruable from its position as a transit state. Nord Stream 2 is a new pipeline, but may not deliver new gas to Europe (Meredith, 2021). In this regard, Washington considers the project as a critical component of Russia's multi-layered gas policy designed to project Kremlin global assertiveness (Blinken, 2021), with the potentials of undermining transatlantic partnership and US' geostrategic and economic interests in Europe.

Moreover, the project is vividly demonstrative of the way in which Russia uses her energy (including critical energy infrastructure) to project rising regional and global influence, roll back the progress of the West in its battle against resurgent global authoritarianism, undermine western electoral processes through cyber-attacks and disinformation strategies, and institutionalise state-sponsored corruption and influence of "ghost money" in western democracies (Branford, 2017; Blank, 2021). In addition, "on a marginal cost basis, the pipeline project is a circumventing strategy against competitively priced U.S. LNG" (Goldthau, 2016). It offers a

formidable competition, and enjoys a considerable market share which the U.S. LNG has to grapple with.

For the United States, very important issues of US-Germany cooperation and its potentials for addressing global challenges of climate change and COVID-19 pandemic, Europe's energy and national security interests, Ukraine's long-term economic and strategic stability, and security of the Baltic region and transatlantic alliance are critical in formulating a national policy response to the Russian gas pipeline project. In response to the threats of Nord Stream 2 to U.S. strategic interests therefore, successive U.S. governments, from Barack Obama through Donald Trump were opposed to the implementation of the project, as both chambers of Congress on a bipartisan basis, despite repeated assurances to European investors that the U.S. would not use the Countering America's Adversaries Through Sanctions Act against any Russian energy export pipelines initiated before August 2, 2017 (Hackenbroich & Liik, 2021).

Under the presidency of Donald Trump, the U.S. was intensely against the completion of the project, with the President applying sanctions on Nord Stream 2 and its management team (Gardner & Daphne, 2021). During this period, the Congress also made several attempts at halting the pipeline through sanctions which targeted the shipping industry as well oil and gas technology. The U.S. National Defense Authorization Act (NDAA) 2020, the Protecting Europe's Energy Security Act (PEESA) sanctions had targeted pipe-laying vessels involved in Nord Stream 2 (McDougall, et al., 2020).

However, from his initial opposition to the project; a continuation of Trump's approach which was widely applauded by overwhelming majority in both Chambers of the Congress, President Joe Biden has chosen a less combative approach to Nord Stream 2, loosening sanctions on the project and initiating sanction waivers. Joe Biden's policy stand finds justification in Ambassador Daniel Fried's argument. Fried had observed in Hackenbroich & Liik (2021) that:

sanctioning a German-Russian project is possible, but would be too costly. Doing so would not be in line with...a guiding principle of

US foreign policy: America may have the power to take a certain action, but it sometimes needs to privilege cooperation with allies where it really matters...

This runs contrary to Secretary Antony Blinken's vow during Congressional confirmation hearing to frustrate the project and prevent its successful completion. Blinken's expressive pledge resulted in Biden's Administration initial imposition of sanctions to stall the construction of the project by imposing sanctions on the entities involved in the pipeline construction. In the aftermaths, several Russian companies were affected, including Koksokhimtrans, Mortransservice, the Samara Heat and Power Property Fund and the Russian Marine Rescue Service, while 13 Russian ships were blacklisted (Langrock, 2021). But the measures exempted the Russian-backed Nord Stream AG in the "national interest" of the United States (US State Department, 2021), a decision which drew the anger of Congressional members across party divides, and despite the State Department acknowledging that the company and its chief executive, Matthias Warnig, had engaged in "sanctionable behaviour" (US State Department, 2021).

As noted by the US State Department (2021), Nord Stream 2 is "a bad deal for Europe" though, Biden's Administration is not inclined to deploying extraterritorial sanctions in resolving issues with Europe, at least for now. Whereas Washington appreciates the enormous impact of Nord Stream 2 on EU and Ukraine's energy security, there is a preference for a less belligerent approach in the emerging US-EU rapprochement. In what could be considered as a major historical twist, Antony Blinken who had hitherto expressly vowed to frustrate the completion of Nord Stream 2 is now the leading figure in the resolution of the crisis which the pipeline project had created for transatlantic partnership. The Biden administration had chosen to issue sanctions waivers in exchange for a package deal which would guarantee Europe's energy security by reducing its dependence on Russia's gas, and Ukraine's connection to European gas infrastructure at the expiration of the new five year gas deal between Kiev

and Moscow (Shalal, et al., 2021). There are doubts as to the viability of the deal and its ability to assuage the concerns of Washington on Europe's energy security, but there should not be any ambiguity as to the likelihood of such sanction waivers weakening US containment strategy against Russia especially in relations to Europe.

U.S. policy flip-flop under President Biden; a carrot and stick approach towards Nord Stream 2, is a confounding reality in some quarters, and a series of well-judged actions in several others, but it is suggestive of U.S. uneasiness and uncertainties around the project. In a wider context, the US approach especially under Biden could be seen as part of the grand strategy to strengthening transatlantic security especially in the wake of rising Chinese and Russian influence in Western Europe. Rebuilding U.S-German relationship will also be critical to addressing shared global challenges, such as climate change and COVID-19 pandemic. Hence, the resolve of Biden to abandon Trump's unending belligerent grandiloquence toward Angela Merkel's government and reversed his call for the withdrawal of U.S. troops stationed in Germany. President's Biden's decision to re-enter the Paris climate change Accord should also be seen as part of this grand transatlantic relationship building agenda.

Nord Stream 2: Prospects for renewed transatlantic partnership

Nord Stream 2 presents an enormous strategic challenge for European countries, individually and collectively, and the United States. How would Europe and America build a partnership in a way that respect and accommodate diverse and divergent perspectives? Nord Stream 2 is divisive; it circumvents Ukraine thereby undermining European unity and solidarity. But for Germany, a traditional U.S. ally, led by an acclaimed Atlanticist in Merkel, geo-economic considerations are critical in an emerging competitive environment where trade is considered a key weapon for economic development (Gens, 2019). So, Germany's interests may well be markedly differentiated from the U.S. strategic politico-economic considerations in relations to Europe. Not only does the pipeline sucks in diverse interests, it makes a reconciliation of competing interests

extremely difficult on European turf. Interestingly, Germany, again, is caught in the web of super power rivalry, much like the cold war political environment. Though today's environment is markedly different from the 90s, Germany yet creates a theatre for super power rivalry and geopolitics.

Nevertheless, the bigger strategic challenge for both Europe and the U.S. arising from Nord Stream 2, lies in rebuilding decades-long transatlantic alliance in a way that fosters mutual benefits, and provides the sturdiness, oneness and robustness needed in dealing with an economically assertive China. But Russia poses as much a strategic threat as China. It is therefore important for the transatlantic partners to work out an effective compromise to address the grey areas around the pipeline through a robust approach that speaks to the critical issues of mutual benefits and threats.

Nord Stream 2 highlights a sovereignty problem for both Germany and Europe. Trump's economic coercion against Europe sought to exploit Europe's dependency on trade and the interconnections of the global trading regimes (Hackenbroich & Liik, 2021), but the threat of economic blackmail could undermine the continent's ability to take economic decisions without external pressure from an Atlantic partner. Illegal American extraterritoriality which U.S. economic sanctions on EU portends, could engender a tit-for-tat, result in a full blown trade war, and tear apart already frayed alliance (Stelzenmuller, 2021; Hackenbroich & Liik, 2021). Importantly, how Germany and Europe respond to U.S. economic threats will send signals to authoritarian states like Russia and China (Hackenbroich & Liik, 2021). The threats posed by the "decade of China," and Russia's energy assertiveness in EU should arm-twist the US in making concessions towards rebuilding the transatlantic partnership. But such concessions should safeguard the interests of existing European transit corridors that are likely to come under significant economic burden following the completion of a new gas bypass.

Legislating on Europe's energy security issue, which the U.S. Congress unwittingly seeks to achieve with the Protecting Europe's Energy Security Act, could be counter-productive. While the US may have strong reasons

to kick against Nord Stream 2, economic coercion and sanctions from Washington undermine the very essence of diversifying away from Russian gas, and does little to strengthen Washington's continued solidarity with the EU. Nevertheless, there are reasons to be hopeful of a compromise between the U.S. and Europe, despite the political pressure on both sides. The laying of pipeline for line 1 of the project has now been completed; given this reality, the Biden administration needs to undo significant damages visited on EU-US alliance by President Donald Trump, while addressing the risks posed by the pipeline project to all its stakeholders. There is a greater need for the U.S. to reconnect with Europe and recommit to the transatlantic partnership to provide a moral compass for driving continental unity and promoting transatlantic relations. This realisation became the highlight of President Biden's speech at the Munich Security Conference held in February 2021.

Beyond Nord Stream 2: Examining African Alternatives to Russian Gas Exports to the EU

Diversifying gas import to Europe is critical to EU energy security (European Parliament, 2021). This quest not only promote energy security, it reduces the vulnerability of the bloc to the geopolitical constraints associated with heavy reliance on Russian gas (Stern, 2009). Several alternatives to Russian gas export to the EU already exist, but challenges, such as geography, cost, supply security, and politics frustrate their viability (Stern, 2005). Though a new energy industry expansion policy is in place in Norway, the country's gas production has peaked already (Norway's Ministry of Petroleum and Energy, 2021). The Netherlands' situation is not different from Norway, and her situation is further complicated by government's decision to halt Groningen gas production by 2022 (Meijer, 2019). In addition, Russia yet exercises significant influence on Ashgabat and Baku, exploiting her strategic military and security agreements with the Eurasian countries (Ramani, 2017). As noted earlier, the US is a net exporter of LNG to Europe. Even where there is necessary infrastructure to liquefy its gas, US supplies to the EU are 30-40% more expensive than Russian piped gas (Kutcherov,

et al. 2020). So, logistics and cost are formidable challenges to US LNG inroads into Europe.

How much of a reliable alternative is African gas to Nord Stream 2? The EU already imports a sizeable volume of its gas needs from North Africa, with Algeria providing 12% of EU gas consumption (Eurostat, 2021). Suffice it to say that all imports from Egypt and about 45% of the Algerian volumes arrive in Europe as liquefied natural (LNG) (Lochner & Dieckhoner, 2011). With the political turmoil in Libya at the start of the decade, the Greenstream pipeline from Libya, which supplies 10bcm of natural gas to Italy each year, stopped operations (Locher & Dieckhoner, 2011), denying the Italian gas market of significant volumes. Algeria is marred by security threats. The four-day hostage crisis in January 2013, highlights security concerns in North Africa's largest hydrocarbon producer. In addition, Algeria's natural gas production and exports have seen significant fluctuation since 2005 (Ratner, M; Belkin, et al. 2013).

The Nigeria-to-Morocco (NTM) gas pipeline provides yet another alternative to Nord Stream 2. The project, a joint venture between the governments of Nigeria and Morocco, was signed in Rabat, Morocco, in 201, and it is driven by the need "to create a competitive regional electricity market with the potential to be connected to the European energy markets" (Reuters, 2013). The NTM pipeline will transport Nigerian gas through the West African gas pipeline (WAGP) to Tangiers in Morocco before reaching Cadiz in Spain (Reuters, 2013). The WAGP, a 421-mile (768-km) pipeline, runs from Escravos in Nigeria's Niger Delta through Badagry in Lagos to Takoradi in Ghana, and already connects Nigeria, Benin, Togo and Ghana (WAGP, 2020). The alternative to NTM is the \$12 billion, 2,485-mile (4,000-km) overland Trans Sahara Pipeline (TSP). Proposed in the 1970s, the TSP was designed to transport Nigeria's gas across the Sahara Desert through Trans-Mediterranean pipeline (TMP), to connect gas stations in Spain and Italy. However, security challenges resulting from the activities of Al-Qaeda in Algeria and Boko Haram in Nigeria and the Sahel region, as well as a lack of market opportunities have combined to frustrate the TSP project (Conan, 2011). But like the TSP, NTM pipeline faces significant challenges,

including security, vandalism and supply disruptions (Newman, 2021). The WAGP has been frustrated several times by energy-maritime criminal activities of the Niger Delta militants, preventing Nigeria from honouring gas supply agreements with neighbouring states (See Obanijesu & Macaulay, 2009). However, as domestic demand for gas continues to grow across West Africa, it may be expedient for NTM gas pipeline to preference domestic consumption over external needs.

The African alternatives to Russian gas exports to Europe remain marginal especially given the volume of Russian gas currently piped to Europe. Much as Europe currently imports parts of her energy needs from Africa, in the event of significant disruption to Russia's Nord Stream 2, the block may have to look further afield the U.S. and Central Asia to meet rising demands. As it stands, Nord Stream 2 will further alienate African gas producers from the EU as Russia will offer a more comparatively reliable and steady supply. LNG offers a more reliable alternative pathway to EU energy security though, and Nigeria has a comparative advantage in this regard over other African gas suppliers, accounting for half of the continent's current LNG production capacity (Africanews, 2019). But Nigeria's NLG supplies to Europe will face stiff competition from US and Qatar.

Conclusion

It is clear that EU countries cannot at this moment achieve energy efficiency on a level that will substantially reduce demand for fossil fuel. Attaining greater energy security through access to deliveries of fossil fuel is, therefore, of utmost significance in both the near and medium term. However, it will be a great loss to the EU if it allows this approach to lull it into a false sense of energy security and bind itself too closely to a Russia whose energy resources are often deployed in furtherance of national interests. Upon full operations of Nord Stream 2, significant economic benefits will accrue to Russia and the EU. However, these benefits will be partly offset by attendant increase in Russia's ability to use her energy resources to project influence into its former spheres of influence. It is the

view of this paper that, Nord Stream 2 is a medium-term energy solution and, if not supplemented by longer-term solutions, will impose great political and economic consequences.

Whereas Nord Stream 2 will diversify supply routes and promote security of gas supply, EU's increased dependence on Russian gas and the accompanying economic power of Gazprom will prove to be the inevitable consequence. This situation will provide a platform for Russia to be more powerful and possibly, more assertive in its relations with the EU. The development will also embolden Russia in her relations with the US. Germany's endorsement of Nord Stream 2 undermines transatlantic relations and EU solidarity and quest for a common energy policy. In some quarters, the Russo-German gas deal is considered as Germany's endorsement of Russian annexation of Crimea, a perception which strengthens the ember of disunity in Europe. In the light of this and foregoing analyses, this paper, while recognising that Nord Stream 2 creates a bypass option in the event of future conflicts with the transit states, submits that, the pipeline project represents a smokescreen for enhanced Russian leverage over the EU. This submission is reinforced by the realisation that Russia's energy policy has sought to counteract independent European access to other sources of energy particularly the Caspian region. The overall agenda is to consolidate Russia's dominance as a gas exporter and strengthen her hold over European energy supply. Russia's lead in the quest for the formation of the Gas-Exporting Countries Forum (GECF) should be seen as critical to this grand objective. However, the U.S. response to the pipeline project should not be seen entirely from the prism of pragmatic altruism viz-a-viz EU's possible disadvantaged position in relations to Russia. Rather, it should be considered a case of economic patriotism. Any country seeking significant inroads into Europe's energy market would, inevitably, see Nord Stream 2 and Russia's Gazprom as threats. Increased Russian advantage over EU's energy market which the pipeline guarantees, undermines U.S. quest for an accelerated expansion of her LNG exports to Europe. Nord Stream 2 may have signalled

the dawn of a “gas war” between the U.S. and Russia, which will further complicate already fractured relationship between the two.

Overall, this paper has argued that the Nord Stream 2 pipeline will only change the transit route for the transportation of Russian gas to Europe but not the source of gas. The project undermines regional unity and significantly frustrates Africa’s gas export prospect to Europe. In dealing with Russia, therefore, a more formal framework is required to coordinate and streamline EU energy policies. A common energy policy will enable the European countries to develop a common and united front in their relations with both Russia and the US, with the realisation that closer collaboration can head off disagreement and foster mutually beneficial energy transactions.

R E F E R E N C E S

- Adomaitris, N. (2020). Norway sees rapid growth in oil output from 30-year lows. *Reuters*. Jan. 9.
- Adomeit, H. (2011). Russia and its near neighborhood: competition and conflict with the EU. *Natolin Research Papers*, April. College of Europe Natolin campus. adomeit_0.pdf (coleurope.eu).
- Africanews (2019). African liquefied natural gas (LNG) to attract \$103 billion in 2019. *Africanews*.
- Ariel C. (2006). The North European gas pipeline threatens Europe’s energy security. *Backgrounder*, No. 1980, Oct. 26, The Heritage Foundation.
- Balmaceda, M. (2013). Politics of energy dependency: Ukraine, Belarus, and Lithuania between domestic oligarchs and Russian pressure. Toronto: University of Toronto Press.
- Bendik, S. W. (2008). Nord Stream: Not just a pipeline—An analysis of the political debates in the Baltic Sea region regarding the planned gas pipeline from Russia to Germany. *FNI Report 15*. Fridtjof Nansens Institute, Norway.

- Blank, S. (2021). How a complex web of Russian money could be compromising the EU's youngest member. *The Parliament Magazine*. www.theparliamentmagazine.eu.
- Blinken, A. (2021). Nord Stream 2 and potential sanctionable activity. US Department of State, March 18.
- Bouwmeester, M. C. & Oosterhaven, J. (2017). Economic impacts of natural gas flow disruptions between Russia and the EU." *Energy Policy*, 106: 288-297.
- Brenford, B. (2017). Information warfare: Is Russia really interfering in European states?" *BBC News*, March 31.
- British Petroleum (2021). *Statistical Review of World Energy 2021*, 70 Edition. *Statistical Review of World Energy*.
- Cohen, A. (2018). Russia's Nord Stream II pipeline is Ukraine's worst nightmare. *Forbes*, June 18.
- Conan, L. (2011). The Trans-Saharan gas pipeline: An overview of the threats to its success and the means to prevent its failure. *Oil, Gas & Energy Law*, Vol. 3.
- Cornell, S.E. & Nilsson, N. (2007). Europe's energy security: Gazprom's dominance and Caspian supply alternatives. Institute for Security and Development Policy (ISDP). Europe's Energy Security. Gazprom's Dominance and Caspian Supply Alternatives (silkroadstudies.org), Feb. 1.
- Danish Energy Agency (2020). "Nord Stream 2 AG may use pipe-laying vessels with anchors." Press Release, July 6.
- Dieckhoner, C. & Lochner, S. (2011). European Gas Imports from North Africa—Reassessing security of supply in the light of political turmoil. *Intereconomics-Review of European Economic Policy*, 46/3, May/June.
- Zhdannikov, D.R.B. (2013). Ukraine Signs Landmark \$10 billion shale gas deal with Shell. *Reuters*, Jan. 24.
- Ellyatt, H. (2020). Germany piles the pressure on Russia after Navalny poisoning, with gas pipeline in the balance. *CNBC*.
- United Nations Treaty Collection (UNTC). Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) - the "Espoo (EIA) Convention. UNTC.
- European Parliament (2021). EU Parliament Resolution of Jan. 21 on the arrest of Aleksei Navalny (RSP). Texts adopted—The arrest of Aleksei Navalny, Thursday, Jan. 21 (europa.eu).

- Eurostat (2020). Energy, transport and environment statistics. Energy, transport and environment statistics. *Products Statistical Books*. Eurostat (europa.eu).
- Eurostat (2021). Shedding light on energy in the EU—A Guided Tour of Energy Statistics- 2021 Edition.” *Eurostat*, April 30.
- Finon, D. (2007). Russia and the “Gas-OPEC”: Real or Perceived Threat? Russia/NIS Center. *Russie.Nei.Visions*, No 24, November.
- Fischer, S. (2016). Nord Stream 2: Trust in Europe. Center for Security Studies (ETH Zurich).
- Gardner, T. & Daphne, P. (2021). U.S. imposes sanctions on Russian vessel involved with Nord Stream 2 pipeline.” *Reuters*, Jan. 19.
- Gazprom* (2019). Nord Stream 2: A new export gas pipeline running from Russia to Europe across the Baltic Sea.” <https://www.gazprom.com/projects/nord-stream2/>.
- Gazprom* (2021). Nord Stream: A new export gas running from Russia to Europe across the Baltic Sea. wermac.org.
- Gens, B. (2019). Germany’s Russia policy and geoeconomics: Nord Stream 2, sanctions and the question of EU leadership toward Russia.” *Global Affairs*. 5/4.
- Goldthau, A. (2016). Assessing Nord Stream 2: regulation, geopolitics & energy security in the EU, Central Eastern Europe & the UK. The European Centre for Energy and Resource Security & King’s Russia Institute. Strategy Paper No 10.
- Hackenbroich, J. & Liik, K. (2021). The Nord Stream 2 dispute and the transatlantic alliance. European Council on Foreign Relations (ecfr.eu), April.
- Hedenskog, J. & Larsson, L. R. (2007). Russian leverage on the CIS and the Baltic States. Swedish Defence Research Agency (FOI), User Report, FOI-R-2280-SE, June.
- Hubert, F. & Suleymanov, I. (2009). Baltic Sea pipeline: The profit will be distributed differently. *German Institute of Economic Research*, 12/5, May.
- IAIA (1999). Principles of environmental impact assessment best practice. International Association of Impact Assessment and the Institute of Environmental Assessment (IAIA) in Cooperation with Institute of Environmental Assessment, UK. Principles of IA (iaia.org).

- International Energy Agency (IEA) (2020). European Union 2020. *Energy Policy Review*, June. European Union 2020.
- Isachenkov, V. (2019, December 31). Russia, Ukraine finalize deals for gas transit to Europe. *AP News*.
- Kavalov, B. Petric, H. & Georgakaki, A. (2009). Liquefied Natural Gas for Europe Some important issues for consideration. EUR 23818 EN. Luxembourg: Liquefied natural gas for Europe - Publications Office of the EU (europa.eu).
- Khrennikova, D. (2021). Why the world worries about Russia's Nord Stream 2 pipeline. *The Washington Post*, May 21. <https://www.washingtonpost.com/business/energy/why-the-world-worries-about-russias-nord-stream-2-pipeline/2021/05/20/4b6f71be-b9>.
- Kirby, P. (2014). Russia's gas fight with Ukraine. *BBC News*.
- Kluth, A. (2020). Nord Stream 2 could sever transatlantic ties. *The Washington Post*, July 14.
- Kovacevic, A. (2009). The impact of the Russia-Ukraine gas crisis in Southeastern Europe. *Oxford Institute for Energy Studies*, March.
- Kruse, M. & Berkahn, A. (2019). Nord Stream 2 economic impact on Europe. Arthur D. Little Global, May.
- Kutcherov, V., Morgunova, M., Bessel, V. & Lopatin, A. (2020). "Russian natural gas exports: An analysis of challenges and opportunities." *Energy Strategy Reviews*, July. 30.
- Lang, K. & Westphal, K. (2017). Nord Stream 2- A Political and Economic Contextualization. Stiftung Wissenschaft und Politik (SWP) *Research Paper*. German Institute for International and Security Affairs.
- Langrock, P. (2021). US imposes sanctions on Russian companies and ships related to Nord Stream 2. *TASS*, May 21.
- Larsson, R. L. (2006). Russia's energy policy: Security dimensions and Russia's reliability as an energy supplier. Stockholm: The Swedish Defence Research Agency.
- Lepesant, G. (2014). The European Neighbourhood Policy put to the test by the Ukrainian crisis. *European Issues and Interviews*, Oct. 6.
- Mammadov, R. (2020). Belarus's role in East European energy geopolitics. The Jamestown Foundation. Jan. 31.

- McDougall, K., Reisinger, S. H. & Greenwood, S. (2020). Update on US sanctions in respect of Nord Stream 2 and TurkStream pipelines." Norton Rose Fulbright.
- Meijer, B. H. (2019). Netherlands to halt Groningen gas production by 2022. *Reuters*, Sept. 10.
- Meredith, S. (2021). The Nord Stream 2 dilemma: Why a transatlantic dispute is likely to go from very bad to even worse. *CNBC*, March 9.
- Newman, N. (2021). Hopes renewed on Nigeria-Morocco Pipeline. *Pipeline & Gas Journal*, 248 (6).
- United Nations Economic Commission for Europe (ENECE). Convention on Environmental Impact Assessment (EIA) in a Transboundary Context. Espoo.
- Norway's Ministry of Petroleum and Energy (2021). Government publishes white paper on long term value creation from Norway's energy resources. Press Release. Government. No. 11 June.
- Obanijesu, E. O. & Macaulay, S. (2009). West African Gas Pipeline (WAGP) Project: Associated Problems and Possible Remedies. Yanful, E.K. (eds) *Appropriate Technologies for Environmental Protection in the Developing World*. Springer, Dordrecht.
- Ouki, M. (2019). Algerian gas in transition: domestic transformation and changing gas export potential. Oxford: The Oxford Institute for Energy Studies (OIES) Paper NG 151.
- Pifer, S. (2021). Nord Stream 2: Background, objections, and possible outcomes. Brookings: *Foreign Policy*, April.
- Pirani, S. & Sharples, J. (2020). The Russia-Ukraine gas transit deal: Opening a new chapter. Oxford: The Oxford Institute for Energy Studies.
- Pirani, S. (2019). Central Asian Gas: Prospects for the 2020s." Oxford: The Oxford Institute for Energy Studies. Paper: NG 155. Central-Asian-Gas-NG-155.pdf (oxfordenergy.org).
- Pirani, S., Stern, J. & Yafimava, K. (2009). The Russo-Ukrainian gas dispute of January 2009: A comprehensive assessment. Oxford: The Oxford Institute for Energy Studies. Background (oxfordenergy.org).
- Ramani, S. (2017). Russia's security inroads with Turkmenistan. *The Diplomat*, Nov. 24.

- Ratsiborynska, V. (2018). Russia's hybrid warfare in the form of its energy manoeuvres against Europe: How the EU and NATO can respond together? NATO Defense College. *NATO Research Paper* 147.
- Reuters (2014). Russia's Gazprom says Ukraine's gas debt grows to \$5.3 billion. *Reuters*, July 9.
- Reuters. (2016). Nigeria and Morocco sign gas pipeline deal to link Africa to Europe. *Reuters*, Dec. 3.
- Russell, M. (2021). The Nord Stream 2 pipeline—Economic, Environmental and Geopolitical Issues. European Parliamentary Research Service (EPRS) Briefing Paper. The Nord Stream 2 pipeline (europa.eu).
- Schmitt, B. (2021). Geopolitical weapon: Putin's pipeline nears completion. *Atlantic Council*, June 14.
- Shagina, M. (2021). East–West divides and Nord Stream 2. *Russian Analytical Digest*, 26, University of Zurich, April 12, RAD267.pdf (ethz.ch).
- Shalal, A. Gardner, T. & Holland, S. (2021). U.S. waives sanctions on Nord Stream 2 as Biden seeks to mend Europe ties. *Reuters*, May 19.
- Stein, D.D. (2020). Trans-Caspian pipeline-still a pipe dream? *Atlantic Council*. Aug. 20. <https://www.atlanticcouncil.org/blogs/energysource/trans-caspian-pipeline-still-a-pipe-dream/>.
- Stelzenmuller, C. (2021). Nord Stream 2 impasse threatens transatlantic ties. *Brookings*, March 23.
- Stern, J. (2017). Challenges to the future of gas: Unburnable or unaffordable? Oxford: The Oxford Institute for Energy Studies.
- Stern, J. P. (2005). The future of Russian gas and Gazprom. Oxford: The Oxford Institute for Energy Studies.
- Stevens P. (2009). Transit troubles: Pipelines as a source of conflict. Chatham House, London.
- Tanas, O. & Krasnolutska, D. (2020). Gazprom, Ukraine finalize deals to ship Russian gas to Europe." *Bloomberg*, Dec. 30.
- Tarnogórski, R. (2006). North European gas pipeline—Legal aspects. *The Polish Quarterly of International Affairs*, 15/1.
- TurkStream (2021). Available at: www.turkstream.info.
- Umbach, F. (2014). The energy dimensions of Russia's annexation of Crimea. *NATO Review*. May 27.

United Nations Convention on the Law of the Seas (1982).
unclos+annexes+res.+agreement.

Wagbara, O.N. (2007). How would the gas exporting countries forum influence gas trade?" *Energy Policy*, 35/2: 1224-1237.

West African Gas Pipeline (2020). WAPCo – West African Gas Pipeline Company (wagpco.com).

Westphal, K. (2021). Nord Stream 2 – Germany’s Dilemma. Stiftung Wissenschaft und Politik (SWP). Nord Stream 2 – Germany’s Dilemma - Stiftung Wissenschaft und Politik (swp-berlin.org).

Wood, S. & Henke, O. (2021). Denmark and Nord Stream 2: A small state’s role in global energy politics. *Energy Policy*, January. 148.