



The New Geopolitics of Natural Gas

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In June 2018, **Dr. Agnia Grigas** (right), Ph.D., nonresident Senior Fellow, Atlantic Council and Board Member, LITGAS, participated in the World Gas Conference in Washington, D.C. where she discussed her book, “The New Geopolitics of Natural Gas.” To Dr. Grigas’ left is Mr. Robert McNally, Founder and President of the Rapidan Energy Group, whom, in turn, also contributed an article to this issue of the *GCARD*.

Over the last decade, developments in the natural gas markets have ushered in a transformation of the geopolitics of gas by reorienting the relationships between natural gas exporting, importing, and transit states. Understanding the landscape of the evolving natural gas market illuminates the changing rules of natural gas trade as well as bilateral and multilateral relations between states, many of which see natural gas as a strategic resource and even a tool of foreign policy. My newest book, [The New Geopolitics of Natural Gas](#) (Harvard University Press, 2017), explores this energy revolution, which is driven by the shale boom, the surge of liquefied natural gas (LNG) trade, the rise in interconnective gas infrastructure, and the growing global demand for natural gas as a cleaner fossil fuel. The book focuses on the key regions that are driving a shift in global gas supply and demand: United States, the rising gas



exporter; Russia, the traditional gas exporter; Europe, the traditional gas importer; developing Asia, the growing demand center; as well as other transit and supply countries in Eurasia.

The New Geopolitics of Natural Gas is structured by my proposed analytical framework for the study of the politics of energy. Gas producing and exporting states engage in the *politics of supply*, which can enable a producing or exporting state to pursue export policies from its position of relative strength vis-a-vis the gas consumer. These exporters have the ability then to enhance their national, economic, political, and security interests by policies such as flooding or starving the market, favoring allies, or punishing enemies via pricing or supply policies. Gas importing countries can fall into the *politics of demand* or *politics of dependence* subject to their level of diversification, volumes of imports, and market conditions. Importers stuck in the *politics of dependence* are disproportionately reliant on a particular gas producing state(s) with limited political and economic options available, and thus often operate from a position of weakness vis-a-vis the gas supplier. In contrast, states that can leverage their sizable gas demand vis-à-vis a number of diversified suppliers can be described as utilizing their *politics of demand*. The *politics of transit* describes the dynamics for gas transit states whose territories are essential for the flow of energy supplies from producing states to importing states. Transit states have traditionally featured land-based pipelines, but the introduction of LNG to the market has added the element of international waters to the equation. These states have some leverage and negotiating power vis-a-vis both exporting and importing states, but can fall into the trap of becoming “rentier states.” Finally, we have the *politics of interdependence*, between importing and exporting states where there is equal interdependence between the two. None of the categories above are mutually exclusive: oftentimes, a state can be evaluated through multiple categories depending on the circumstances. My book seeks to address the geopolitics of the natural gas market through these lenses and demystify the complex economic, political, and security relations that stem from the natural gas market.

The United States is at the lead of the market transformation as its unconventional shale gas development has made it the world’s largest natural gas producer in 2011 and a rising LNG exporter. Other conventional energy powers, particularly Russia, continue to rely primarily on piped natural gas exports to the markets of its energy-poor neighbors in Europe and Eurasia. However, the shale boom and influx of LNG into the global gas market is beginning to provide viable energy alternatives for these consumer states. Amidst fraught U.S.-Russia relations, competition over natural gas markets in Europe and Asia has come to the forefront of bilateral relations. On the other hand, China is continuing to build upwards and outwards, consuming more and more energy as it does and seeking to reduce consumption of coal in favor of natural gas to address domestic pollution. As the drivers of global energy demand going forward, China and the other rising Asian powers such as India stand to dictate some of the rules of the new order of the global gas market. In my book, I explore the nature of the market changes, the US’ new energy clout from LNG, the politics of supply for Russia and Gazprom, the politics of dependence in Europe, the limitations on isolated suppliers in Eastern Europe and Central Asia, and the power of demand in Asia. The profound implications of the changing global gas markets will leave their mark on global geopolitics.

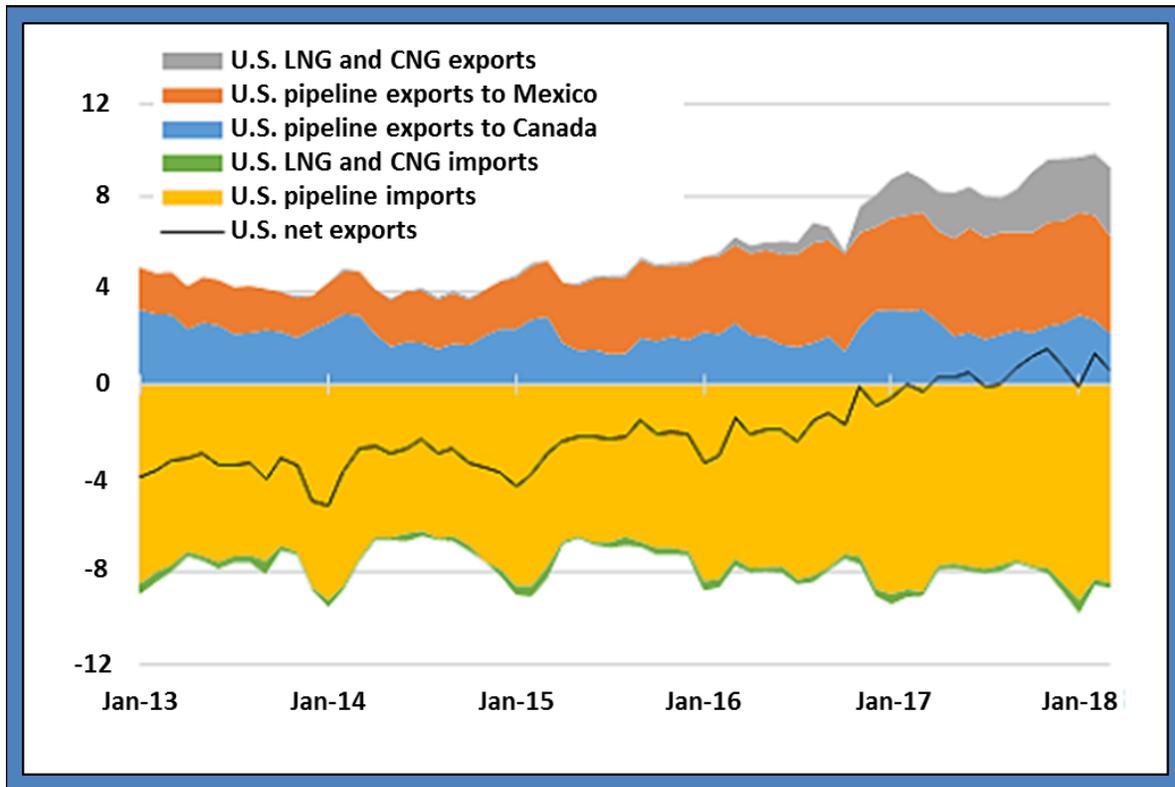


Marked by the so-called Shale Revolution that unlocked the production of unconventional gas in North America, coupled with the growth of global LNG trade and the continued buildup of natural gas infrastructure, the gas market itself no longer looks like that of the 1990s or early 2000s. The gas trade itself is increasingly shifting from long-term contracts that locked consumers into set relationships and prices to short- and shorter-term contracts and spot trades. Furthermore, gas pricing is increasingly hub-based, as opposed to traditionally-preferred oil-based pricing. Destination clauses that hindered the re-export of natural gas across state borders have been eliminated in the European Union and are not pursued by American LNG exporters. Liquidity, flexibility, and optionality mark today's markets while some even discuss a "gas glut." These shifts illustrate that the natural gas market is moving towards a buyers' market when it has traditionally been the exporters that established the terms of the trade.

Despite the accruing benefits for gas importers, the U.S. has emerged as a global energy superpower due to these shifts in the energy markets. In 2016, the U.S. launched its LNG exports and it is poised to become the world's third largest LNG exporter by 2020, just behind Australia and Qatar, according to EIA (2018). Emerging as a global gas leader, the U.S. has increased its energy diplomacy potential. The combination of shale gas production and LNG exports has given the U.S. a solid position as a newly exporting state and many first-mover advantages in the globalizing gas markets. The first quarter of 2018 saw the U.S. become a net exporter of natural gas for the first time since 1957. The EIA projects that U.S. natural gas exports will only continue to increase. Figure 1 on the next page illustrates the recent trend in natural gas exports.



Figure 1
U.S. Natural Gas Imports and Exports
(Billion cubic feet per day)



Note: A minor fraction of Canadian exports and imports consists of compressed natural gas (CNG).

Source: U.S. Energy Information Administration’s *Natural Gas Monthly*.

On the other side of the spectrum, there is Russia, a traditional natural gas export powerhouse. Soviet and then Russian gas has been exported by pipeline to Western European states since the late 1960s and early 1970s. Russia’s state-owned gas company, Gazprom, has served to implement the Kremlin’s gas diplomacy and even gas weaponization vis-a-vis many of Russia’s neighboring states. Since the early 2000s, Gazprom has helped shape foreign policy, taking such measures as cutting off gas supplies to Ukraine in 2005, 2009 and again in 2014, which has impacted gas volumes delivered to European customers. Gazprom has also politicized the pricing of its gas, offering far lower prices to large Western European consumers and obedient allies like Belarus than countries like the Baltic States or Ukraine, with which Russia has had numerous political and gas disputes. Nonetheless, due to its geographic proximity and existing pipeline infrastructure, Russian gas remains in high demand in Europe and beyond.

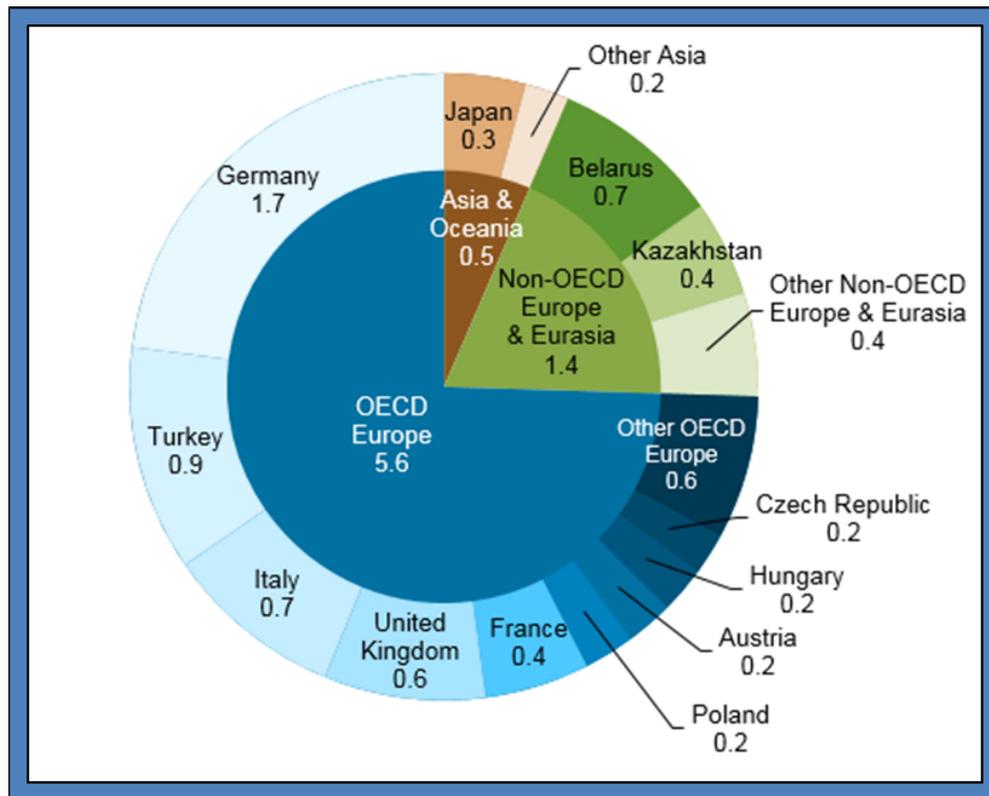
Russia’s monopolist position and political leverage over its key natural gas market of Europe is eroding due to the abovementioned market changes. In 2017, the American LNG company, Cheniere Energy, Inc., delivered its first shipments of LNG to both Poland and Lithuania, marking a symbolic turning point in that region’s energy independence and security (Grigas, 2017). LNG import capability have allowed



countries like Poland and Lithuania to diversify their import sources and routes, have boosted their energy security, and reduced Gazprom’s ability to strong-arm them in energy relations while simultaneously reducing the Kremlin’s clout in the region.

However, Russia will not give up its markets without a fight. Europe has been the primary destination for Russia’s gas exports – in 2016, approximately 75% of its gas exports were destined for OECD Europe; please see Figure 2. Germany and Turkey remain the largest markets for Gazprom’s exports. The Russian-led Nord Stream II Pipeline, which seeks to boost Russian gas exports to Germany via a new pipeline under the Baltic Sea, would cement Russia’s hold on the European gas market, and particularly German market, all while bypassing Ukraine and depriving Kyiv of critical transit fee income (Grigas, 2018). Critics of the pipeline point to the increase of LNG in Europe as an alternative to Russian gas. The United States has even threatened to include companies involved in the project in its Russia-related sanctions. Russia is simultaneously pursuing the TurkStream Pipeline, which would boost exports to Turkey and could access the Southeast European market. Both pipelines reflect Russia’s efforts to consolidate its control over the European gas market, even while the European Union’s energy security strategy continues to push for diversification.

Figure 2
Russia’s Natural Gas Exports by Destination, 2016
 (Trillion cubic feet)



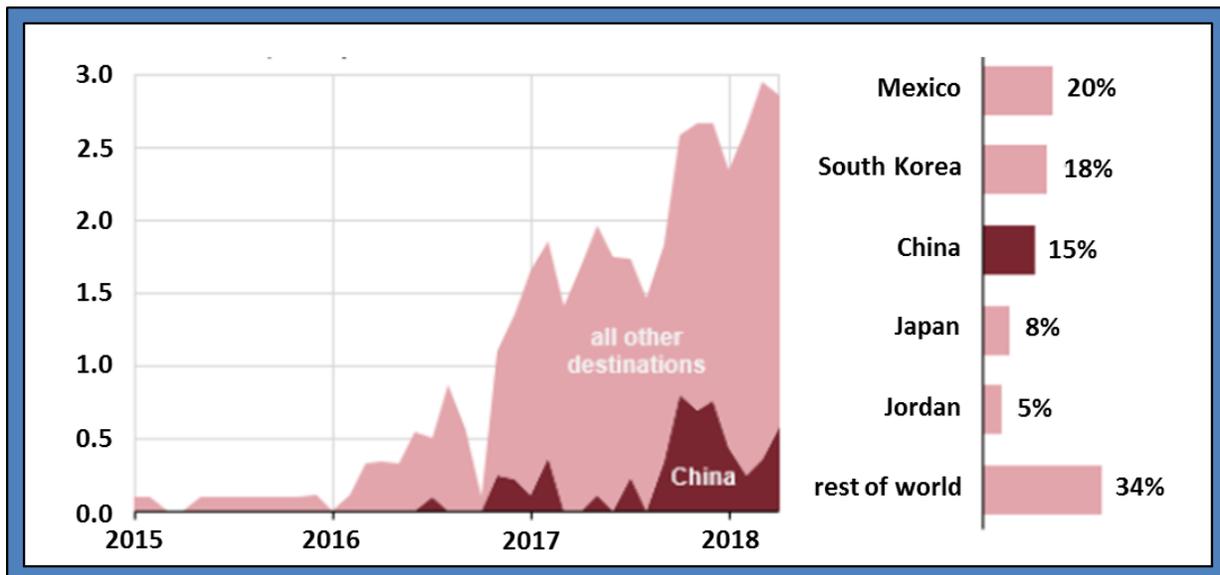
Source: U.S. Energy Information Administration, based on Russian export statistics and partner country import statistics, Global Trade Tracker.



As the new global centers for demand, the Asian gas markets are booming and developing. Today’s top five LNG buyers are all in Asia: Japan, China, South Korea, India, and Taiwan. These countries accounted for almost two-thirds of global LNG demand in 2015, and are expected to import more than half of the U.S. LNG capacity between 2016 and 2019. Already, South Korea is the 2nd largest buyer of U.S. LNG, followed by China and Japan; please see Figure 3. The Asian cases represent a change in the traditional gas market. China’s gas consumption increased nearly ten-fold between 2000 and 2016, outpacing the amount of natural gas produced by 2007 and becoming a net natural gas importer; please see Figure 4 on the next page. China possesses the world’s largest estimated shale reserves and is one of the four countries in the world that have hydraulic fracturing programs. Yet, China’s appetite for gas is only expected to grow. Unlike European states, China has carefully managed its energy policies and limited vulnerabilities arising from dependence on natural gas imports. Rather, China has used the sheer amount of gas imports it requires as bargaining leverage and power over its numerous and well-diversified supplier states. It imports gas both by pipeline and via LNG from Central Asia, Myanmar, Russia, the U.S., Australia, Qatar, Nigeria and others. China remains a “wildcard” in the gas market, given that the actual percentage of gas consumption in its overall energy mix is still quite low and there are competing forecasts on how much and how fast this percentage will rise. However, considering that China continues to promote natural gas as a key fuel, its potential to be a major force in the gas market is substantial. The EIA predicts that China will emerge as a key gas buyer before 2021 as it looks for ways to replace coal with natural gas. India is another country to watch and one that will also be one of the drivers of future global gas demand.

Figure 3
U.S. Liquefied Natural Gas (LNG) Exports (Jan 2015 - Apr 2018)
(Billion cubic feet per day)

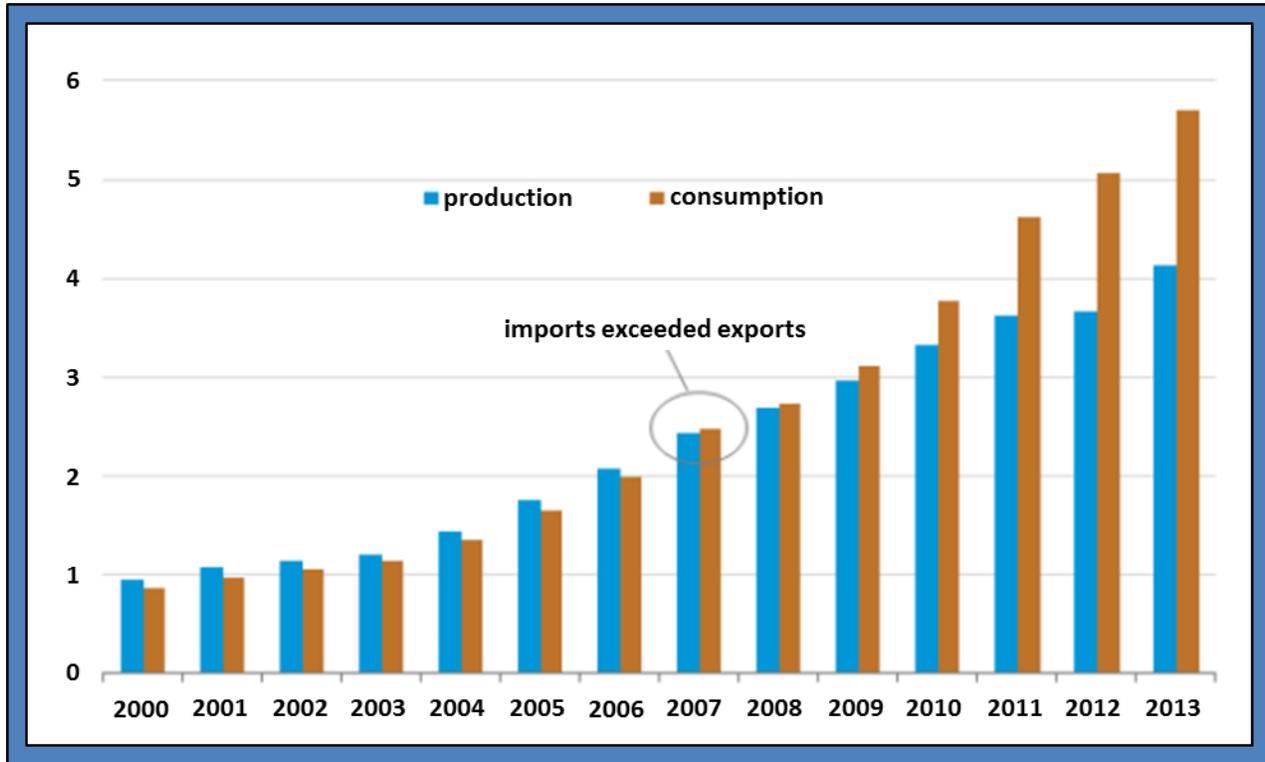
Share of 2017 LNG Exports



Source: U.S. Energy Information Administration.



Figure 4
China's Natural Gas Production and Consumption, 2000 - 2013
 (Trillion cubic feet)



Source: U.S. Energy Information Administration, *International Energy Statistics*.

In light of these changes, the debate continues around whether a global gas market has already emerged. There are outstanding questions of whether the nature of gas itself prevents it from being a truly liquid, global commodity and to what extent piped gas can compete against LNG. As I affirm in my book, I believe that the natural gas market is more global than ever before with regional markets becoming increasingly interconnected and with the disappearance of regional price differentials other than the cost of gas transport. As gas becomes more global, we are seeing a de-politicization of the gas trade. Individual countries, whether they are importers or exporters, have more optionality and flexibility in their gas trade than in the past when gas was a regionally traded commodity often doled out by monopolist companies.

Do these changes mean that the gas market will see more stability in the future? I believe so. The globalization of gas markets and the transformations underpinning it will bring long-term stability to the market due to greater liquidity and optionality. Nonetheless, the emergent interconnectivity will increase opportunities for day-to-day market fluctuations since developments in one market can now more easily impact other markets. Even with these benefits from a globalizing gas market, challenges and risks still remain. In our digitized world, the globalized gas market is more susceptible than ever to digital threats from malicious actors. The growth of LNG in the overall gas trade means that pipelines are no longer the only vulnerable point of gas infrastructure and trade. Ports, sea routes, terminals, and



tankers now need to be secured as well, physically and digitally. Furthermore, the weaponization of information will continue to pose global challenges, including for the gas market. False or misleading information relating to the energy markets can be used as part of a propaganda campaign to influence local, state, regional and institutional decision-making vis-à-vis energy policy. These risks should be taken into account, as we continue to watch the natural gas trade develop and globalize.

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Author Biography

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Dr. Agnia Grigas specializes in energy and security policy. She has authored three critically-acclaimed books: *The New Geopolitics of Natural Gas* (Harvard University Press, 2017), *Beyond Crimea: The New Russian Empire* (Yale University Press, 2016), and *The Politics of Energy and Memory between the Baltic States and Russia* (Routledge 2013/2016). Currently, she is a nonresident Senior Fellow at the Atlantic Council, a board member of LITGAS, and an Associate with Argonne National Laboratory. With fifteen years of experience as a business development and political risk advisor, Agnia has consulted in both the public and private sectors, including having served as an advisor to the Lithuanian Ministry of Foreign Affairs. She started her career at J.P. Morgan as a financial analyst and subsequently worked for companies such as Eurasia Group and Barclays Bank. She holds a Doctorate and Master's in International Relations from the University of Oxford, United Kingdom (Brasenose and St. Antony's Colleges) and a B.A. in Economics and Political Science from Columbia University in New York. Learn more by following her @AgniaGrigas and at www.grigas.net