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## **Political and Economic Feasibility of Contracted American Liquefied Natural Gas for Energy Security in Poland and the Baltic States – Can the American Government Help?**

**Abstract:** At the heart of the European Union (“EU”) energy policy is energy security. Energy security is maintained, in part, by a diversification of supply. Despite the fact that the EU has prioritized diversification, its dependency on Russian natural gas has increased in recent years. Contemporaneously, the political relationship between the EU and Russia has worsened. Construction of NordStream 2 (“NS2”) will further establish Russia as the dominant supplier of natural gas to the EU while lessening the diversification of its energy supply. To further the EU’s stated goals of energy diversification and security, another steady source of natural gas imports for the countries along the Baltic Sea is needed. LNG importation assets in Poland and the Baltic states exist for this purpose. Unlike other EU members, these countries have demonstrated the economic and political will to curb the coercive influence of Russian natural gas imports. America is awash in natural gas, with plenty for export and can send increasing volumes of LNG worldwide. In contrast to other sources, America is well located to supply Europe with secure LNG, and its importation should be a shared goal of the EU and America. Despite the desire of some American statesmen to use the “shale gas revolution” to further U.S. geopolitical goals; however, the U.S. hydrocarbon industry (unlike in Russia) is overwhelmingly controlled by private landowners and industry. The goal of the American, Polish, and the Baltic states should therefore be narrowly focused on establishing free trade agreements and the encouragement of longer-term contractual relationships between America and Poland and the Baltic states.

**Keywords:** energy, LNG, natural gas, Russia, Poland, Lithuania

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1 The author thanks Grant Armentor, Byron Kulander, and Ben Semmes for their assistance with this project. This article is dedicated to the memory of Anna Mary Sullivan, Sep. 9, 1920–Dec. 19, 2019. © 2020 Christopher Stewart Kulander. All rights reserved.

Equity Capital Structure, <https://www.gazprom.com/investors/stock/structure/> (access 08.19.2020).

## Introduction

The energy security of Poland and the Baltic states must remain strong to provide political and economic stability to the region. The use of North American-sourced LNG and, possibly, locally-derived sources of unconventional natural gas as alternatives to coal and Russian natural gas provides a means of curtailing CO<sub>2</sub> emissions, a goal of the EU, while restraining Putin's Russia. Even without Russian aggression in Ukraine, the Putin regime is a concern to the collective security of the EU, and relations between the two have deteriorated in the last decade. Despite this, the completion and potential activation of the NS2 pipeline appears imminent.

Will it be economically viable and politically possible to export steady and significant amounts of North American-sourced LNG into the Baltic region? Under the right circumstance, a restrained and realistic American-led effort could deliver some measure of energy security to its friends bordering Russia. This article provides a response by the U.S. and the countries along the Baltic Sea to Russia's direct export of natural gas to Germany. First, the need for energy diversification in the EU is discussed. Then, the current status of LNG assets in Poland and the Baltic states are covered. Next, the state of natural gas production in the USA is discussed. Finally, the feasibility of expanded long-term exports of North American LNG to countries along the Baltic Sea is considered. Here, domestic political and economic issues arise, such as the private ownership of minerals, the need of private financing, the ability to get construction of American export terminals approved, and a realistic assessment of what American and European governments can (and cannot) do to move a larger portion of the LNG trade going across the Atlantic from the spot market to contracted trade.

### 1. Energy Security & Diversification of the European Union

Russian natural gas provides Europe with one of its primary sources of energy. Russian natural gas also provides the Putin regime with a tool of resource-based aggression. Again and again over the last two decades, Gazprom (publicly traded but 38.37% owned by the Russian Federation directly and 10.97% by Rosneftgaz, a holding company owned by the Russian state through the Federal Agency for State Property Management) appeared to respond to directives from the Russian government by curtailing exports at inopportune times with dubious excuses, primarily related to Russian designs on Ukrainian territory and conflicts with Naftogaz, Ukraine's state-owned national oil and gas company<sup>2</sup>. Russia has flexed

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2 See J. Elkind & T. Boersma, Talking Past Each Other: Transatlantic Perspectives on European Gas Security, [https://www.energypolicy.columbia.edu/sites/default/files/pictures/TalkingPastEach%20Other\\_CGEP\\_FINAL.pdf](https://www.energypolicy.columbia.edu/sites/default/files/pictures/TalkingPastEach%20Other_CGEP_FINAL.pdf) (access 08.19.2020).

its natural gas muscles elsewhere, including indirectly curtailing exports to Belarus, Slovakia, Romania, and Bulgaria in the depths of winter.

Despite this history of belligerence, Germany, the largest economy in Europe, is on the cusp of accepting an even larger volume of natural gas directly from northwestern Russia. NS2 is to be a 1230-km long pipeline running along the bed of the Baltic Sea, taking production from the Yamal Peninsula in Siberia directly to Greifswald, Germany. NS2 has drawn invective from several sources—national governments in Eastern and Northern Europe, the USA, and the European Parliament. Yet, companies from Germany, England, France, and the Netherlands are participating in the project. The future of NS2 is not certain, but it will likely become operational—construction is more than 50% complete, and it runs parallel to Nord Stream 1, whose capacity the new pipeline will match. NS2 will significantly increase Russian export capacity and will connect the single largest natural gas market in Europe with one of the largest production regions via a subsea route that crosses the land of no other country.

Opposition to NS2 in Europe is centered in Northern and Eastern Europe and focuses on EU energy policy. Energy security is the core principal, meaning “the uninterrupted availability of energy sources at an affordable price”<sup>3</sup> which could be endangered by a disruption from countries from which the EU imports fuel<sup>4</sup>. This desired “security” is brought into reality through “diversification” of sources. The Security of Gas Supply Regulation was enacted in 2017. Within it, diversification of gas supplies is expressly defined as promotion of increased access to extra-EU LNG<sup>5</sup>.

The EU’s reliance on Russia to meet approximately 38.5% of its total gas demand and 30.0% of the value of all EU imports of gas and oil suggests that no realistic immediate alternative to replace the reliance on Russian gas exists<sup>6</sup>. All the while, NS2 approaches completion. Once complete, it will, despite anxious words from the European Commission and voracious complaints in the EU Parliament, eventually be placed into service. The pipeline will give Russia yet another means to flex its geopolitical muscles. Poland and the Baltic states should have no doubt who will likely get curtailed first in future supply pinches, to say nothing of the threatened curtailments that loom over future political tangles with Russia. This uncertainty

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3 Energy Security: Ensuring the Uninterrupted Availability of Energy Sources at an Affordable Price, <https://www.iea.org/areas-of-work/ensuring-energy-security> (access 08.19.2020).

4 See generally Energy Topics, [https://ec.europa.eu/energy/topics/energy-security\\_en](https://ec.europa.eu/energy/topics/energy-security_en) (access 08.19.2020).

5 See generally A. Danielsson, European Debate on Nord Stream 2, [https://helda.helsinki.fi/bitstream/handle/10138/302864/Danielsson\\_Annette\\_Pro\\_gradu\\_2019.pdf?sequence=2&isAllowed=y](https://helda.helsinki.fi/bitstream/handle/10138/302864/Danielsson_Annette_Pro_gradu_2019.pdf?sequence=2&isAllowed=y) (access 08.20.2020) (providing an excellent compendium of topics related to NS2 and the related political battles within the EU).

6 *Ibidem*, § 2.2.

must be considered alongside the costs of natural gas when determining the desired source portfolio for imported natural gas.

## 2. Regional LNG Importation Assets & Results

Fortunately, the Baltic Coast is now dotted with ports wherein imported LNG can be lifted off tankers and regasified for pipeline transport inland. Bordering the Baltic Sea, Belorussia, and Russia itself, Lithuania and Poland lie at the crossroads of natural gas in Northeastern Europe—a position that could be weakened by Russia's NS2 plans. Poland, for example, concentrating on lowering the volumes of imported Russian natural gas, has paid significantly more for natural gas from Qatar than it might from Gazprom after constructing its LNG regasification terminal in 2015.

Poland is partially dependent upon Russia for natural gas imports. In order to diversify its natural gas supply and reduce this reliance, Poland made plans to enhance its energy security. In 2010 construction was launched for Poland's first LNG importation terminal – the President Lech Kaczyński's LNG Terminal in Świnoujście, on the western edge of Poland's Baltic coast<sup>7</sup>. By October 2015, it was complete, and operations began in April 2016. Polskie Górnictwo Naftowe i Gazownictwo S.A. (PGNiG), through its subsidiary Polskie LNG S.A., developed the terminal. The terminal is operated by Polskie LNG. The project cost was originally estimated to be around € 400 m but this increased to € 950 m, of which € 200 m was supplied by the European Bank for Reconstruction and Development and the outstanding € 750m was provided from the sale of Polskie LNG bonds to ten other banks, each valued at € 75 m respectively<sup>8</sup>. The LNG terminal includes an unloading jetty and mooring system, two cryogenic LNG storage tanks each with a capacity of 160,000 cubic meters, and a regasification capacity amounting to five billion cubic meters annually. The terminal also has the ability to send out natural gas through the connected 85-kilometer-long pipeline from Świnoujście to Szczecin to the National Transmission System, onto tanker trucks, and into other containers<sup>9</sup>.

Polskie LNG is currently executing a contract to expand the regasification facility of the Świnoujście LNG Terminal. In the first phase, additional Submerged Combustion Vaporizer units will be installed, which will increase the annual regasification capacity from 5 billion cubic meters to 7.4 billion<sup>10</sup>. The second phase

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7 LNG Terminal in Świnoujście, <https://en.polskielng.pl/lng-terminal/lng-terminal-in-swinoujscie/> (access 08.19.2020).

8 Świnoujście LNG Gas Terminal, Baltic Coast, Poland, <https://www.hydrocarbons-technology.com/projects/swinoujscie/> (access 08.19.2020).

9 Gaz-System Will Expand the LNG Terminal in Świnoujście, <https://en.gaz-system.pl/centrum-prasowe/aktualnosci/informacja/arttykul/202479/> (access 08.19.2020).

10 LNG Terminal Expansion Program, <https://en.polskielng.pl/lng-terminal/lng-terminal-expansion-program/> (access 08.19.2020).

will consist of constructing a third cryogenic storage tank, a second jetty for loading and unloading of LNG carriers, and a LNG-to-Rail transshipment installation for tankers and ISO containers. Furthermore, on June 24, 2020, Polskie LNG signed a deal with a consortium of Porr and TGE Gas Engineering to further expand the LNG terminal to 8.3 billion cubic meters per year by the end of 2023<sup>11</sup>.

Poland continues to search for new methods to further reduce their reliance on Russian LNG imports and increase its energy security. Piotr Naimski, the Polish secretary of state responsible for energy projects, has stated Poland plans to begin installing a Floating Storage and Regasification Unit (FSRU) to be located in the Bay of Gdansk<sup>12</sup>. The FSRU will add a storage capacity of four billion cubic meters of LNG per year to supplement the current storage expansion of Świnoujście LNG Terminal.

In the mid-twentieth century, natural gas only represented a small percentage of energy sources consumed in Poland as coal was favoured<sup>13</sup>. With the expansion of natural gas transportation to a range of consumers, however, the demand for gas consumption has grown and even accelerated. According to the U.S. Energy Information Administration, Polish natural gas consumption has increased over 30% during the past 10 years – from 1.4 Bcf/d in 2010 to 1.8 Bcf/d in 2019. In 2010, around 90% of the gas imported was supplied by Russia. By 2019, in part due to the construction of the Świnoujście LNG Terminal, Russian imports declined to 60% – accounting for 48% of total gas consumption<sup>14</sup>. With the Świnoujście LNG Terminal connecting to the Polish gas transmission grid, Poland can provide an alternative energy supply from previous coal-powered industries, commercial purchasers, and Polish citizens.

The terminals provide for the import of natural gas to Poland from anywhere and create a path for the actual diversification of gas supplies. This permanently changes the natural gas market in Poland and its environs and increases the competitiveness of LNG vis-à-vis piped-in natural gas, particularly from American LNG<sup>15</sup>. Between 2016 and 2019 (the four years after the construction of the LNG terminal) Poland's LNG imports have grown three and a half times over – from 94 Mmcf/d in 2016 to 331 Mmcf/d – accounting for 18% of the country's total consumption<sup>16</sup>. The

11 A. Barteczko, Poland Signs Deals to Expand its LNG Terminal, <https://www.reuters.com/article/poland-energy-lng-idUSL8N2E12PB> (access 08.19.2020).

12 P. Jabri, Poland Plans Floating Terminal to Boost LNG Imports, <https://www.brecorder.com/2019/05/02/494139/poland-plans-floating-terminal-to-boost-lng-imports/> (access 08.19.2020).

13 See generally E. Chłopińska & M. Gucma, The Impact of a Liquefied Natural Gas Terminal on the Gas Distribution and Bunkering Network in Poland, "Science Journal of the Maritime University of Szczecin" 2018, vol. 53, p. 155.

14 Natural Gas Weekly Update: Poland Seeks to Diversify Natural Gas Imports, [https://www.eia.gov/naturalgas/weekly/archivenew\\_ngwu/2020/05\\_21/](https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2020/05_21/) (access 08.19.2020).

15 LNG Terminal, <https://en.gaz-system.pl/en/lng-terminal/> (access 08.19.2020).

16 Natural Gas Weekly Update..., *op. cit.*

ability to cover almost 20% of demand for natural gas from alternative sources has provided Poland significant independence from Russian influence and will further help to reduce natural gas prices as Poland's negotiating position over Russia improves<sup>17</sup>.

Concerned about the high cost of Russian natural gas, and facing the loss of its own primary source of electricity—the Ignalina nuclear power plant—Lithuania made its own plans for LNG imports. Lithuania has had constructed an LNG importation terminal, the Lithuanian Natural Gas Terminal, which opened in early 2016. The Lithuanian project was funded through a loan of € 87 million through the European Investment Bank. Höegh LNG, a Norwegian company, constructed the FSRU *Independence* in South Korea to be used as an LNG import terminal in Klaipeda Harbor. It has an annual capacity of between 2–3 billion cubic meters of natural gas. In addition, the Klaipedos Nafta AB (Lithuania's state-controlled energy company) hired PPS Pipeline Systems to connect the terminal to Lithuania's natural gas grid. The link to shore is a 20-kilometer pipeline, completed in 2014. All this effort shows the seriousness with which Lithuania considers its energy security. Lithuania accepted its first LNG spot shipment from America at Klaipeda on August 18, 2017, with final client destinations being in Estonia and Latvia as well as Lithuania<sup>18</sup>. By the middle of 2020, five cargos from the USA had arrived, and LNG imported from the USA accounts for more than 6.00% of the total amount of LNG arriving at the Klaipeda LNG terminal thus far<sup>19,20</sup>.

Finland and Estonia have recently completed the Baltic Connector, a 152-kilometer-long bi-directional pipeline between their countries that will also connect the pipeline grid of Latvia. Completion of this pipeline will enable a planned LNG lifting terminal to serve all three countries with natural gas derived from imported LNG<sup>21</sup>.

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17 See E. Chłopińska & M. Gucma, *The Impact...*, *op. cit.*

18 A. Sytas, Lithuania Receives First LNG from the United States, <https://www.reuters.com/article/us-lithuania-lng/lithuania-receives-first-lng-from-the-unitedstates-idUSKCN1B11BW> (access 08.19.2020).

19 L. Woellwarth, Lithuanian LNG Terminal Proving to be a Player in the Global Market, <https://www.lngindustry.com/liquid-natural-gas/26052020/lithuanian-lng-terminal-proving-to-be-a-player-in-the-global-market/> (access 09.21.2020).

20 A. Sytas, Lithuania Receives First LNG from the United States, <https://www.reuters.com/article/us-lithuania-lng/lithuania-receives-first-lng-from-the-unitedstates-idUSKCN1B11BW> (access 08.19.2020).

21 Baltic Connector Gas Pipeline Up and Running Since 1 January 2020, [https://ec.europa.eu/info/news/balticconnector-gas-pipeline-ready-use-1-january-2020-2020-jan-08\\_en](https://ec.europa.eu/info/news/balticconnector-gas-pipeline-ready-use-1-january-2020-2020-jan-08_en) (access 08.19.2020).

### 3. American Production and Exportation

The USA is almost unique in that the surface owner may also own the mineral estate (or an exclusive license to develop same), unlike most other countries where the national government or its state-owned corporate interests own and direct development of minerals<sup>22</sup>. While private ownership has its drawbacks—fractionalized ownership among cotenants and problems of overproduction caused when conservation practices are ignored—the history of production in America shows that development is tied to commodity prices and only secondarily to government control. Further, recovery of slowed American production triggered by a trough in prices occurs very quickly when prices later rebound, as OPEC learned to its woe after it relented on its late 2014 decision to depress oil prices with increased production in the hope of strangling America's burgeoning shale gas development<sup>23</sup>.

Modern directional drilling and fracturing practices, access to capital and pipeline space, and private ownership of minerals means that America is inundated with natural gas. Estimates suggest that the USA has almost 1,750 Tcf (trillion cubic feet) of technically recoverable natural gas, including 200 Tcf of proved reserves (the discovered, economically recoverable fraction of the original gas in place). Technically recoverable unconventional gas—a category that includes gas derived from shale and “tight sandstone” formations as well as coalbed methane (“CBM”)—accounts for approximately 60 percent of the onshore recoverable resource. At 2007 production rates, about 19.3 Tcf, the current recoverable resource is sufficient to supply the USA for the next ninety years. Separate estimates of the shale gas resource extend this supply to 116 years<sup>24</sup>.

The U.S. has strong economic reasons to support LNG sales contracts to Europe. Since significant U.S. domestic oversupply—currently made worse by COVID-19 issues—curtails any near-future price hikes, LNG exports offer a far better option over domestic use to increase demand for gas. By the end of 2018, the U.S. LNG exporting capacity passed six billion cubic feet, up from no capacity outside of distant Alaska at the end of 2015, enough natural gas to provide electricity to all the homes in California, Texas, and Florida. The continued expansion of this exporting capacity provides the best way to bleed off the current overabundance of domestic natural

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22 E. Kuntz et al., *A Treatise on the Law of Oil & Gas*, Anderson Publishing Co. 2019 update, p. 59.

23 See B. Clark, Jr., *OPEC Delivers a Thanksgiving Turkey*, (in:) B. Clark, Jr. (ed.), *Oil Capital: The History of American Oil, Wildcatters, Independents, and Their Bankers*, Houston 2016, p. 370 (describing the attempt by OPEC to stymie burgeoning American shale development by lowering prices in late 2014, only to see the American producers almost immediately rebound when OPEC relented approximately two years later).

24 J. Lowee et al., *Cases and Materials on Oil and Gas Law*, West Academic St. Paul, MN 2018, p. 20.

gas and lift the fortunes of domestic shale producers<sup>25</sup>. For Europe, alternatives to American LNG are more politically unstable (Nigeria), more distant and closer to the Southeast Asia demand sink (Australia), or in unstable regions (Qatar). The primary competition is, as always, Russian natural gas.

The LNG transportation business relies on longer term contracts designed to guarantee the income stream necessary to finance the very expensive liquefaction, gasification and transportation assets and provide investors and lenders with a relatively predictable return<sup>26</sup>. Such long-term agreements link all the parties involved in the transportation chain: the consuming importers, the terminal facilities and shippers, and the financiers that make it all possible<sup>27</sup>. LNG projects generally employ multiple lenders. Liquefaction projects must be designed so that they include both pipelines to the export train and long-term lifting contracts with buyers worthy of credit<sup>28</sup>.

The last ten years have brought optimistic forecasts by politicians from both major American political parties prognosticating that the “shale gas revolution” would give American diplomats a new tool with which to leverage geopolitical power. The nature of the ownership of minerals, combined with private exploration, development, transportation and refining of oil and gas in the USA, all financed with private lending, however, means that the investment determinations of thousands of companies, primarily based on economic forecasts, lifting costs, and transportation models, has sidelined diplomatic puffery. Investment decisions are based on price forecasts, estimates of reserves, production costs, availability of transport and the terms of production sales contracts, and the volume of competing domestic demand, among other factors. Thus, while the private ownership of minerals and private sources of financing ensure that oil and gas are developed, they also ensure that economic factors—instead of geopolitical—dominate the decision to develop and export hydrocarbons. Claims that American production and export of hydrocarbons can be harnessed in the service of broad but unfocused regional diplomatic ends that are not realistically and steadily promoted are imprudent<sup>29</sup>.

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25 S. Di Savino, *After Six Decades, U.S. Set to Turn Natgas Exporter amid LNG Boom*, Reuters (Mar. 29, 2017, 12:08 AM), <http://www.reuters.com/article/us-usa-natgas-lng-analysis/after-six-decades-u-s-set-to-turn-natgas-exporter-amid-lng-boom-idUSKBN1700F1> (access 09.11.2020).

26 M. Tay & A. Sheldrick, *UPDATE 2-LNG Supply Gap May Form as Investment Drop Stymies Projects*, <http://in.reuters.com/article/japan-gastech-lng/update-2-lng-supply-gap-may-form-as-investment-drop-stymies-projects-idINL3N1HC1B4> (access 08.19.2020).

27 For a discussion of the past and present of financing oil and gas transactions from exploration to transportation to distribution, see B. Clark, Jr., *Oil Capital: the History of American Oil, Wildcatters, Independents, and Their Bankers*, Houston 2016.

28 B. Richards, *New Transport Options for Liquefied Gas*, Energy World Dec. 2016.

29 See generally T. Boersma & C. Johnson, *U.S. Energy Diplomacy*, <https://energypolicy.columbia.edu/sites/default/files/pictures/CGEPUSEnergyDiplomacy218.pdf> (access 08.19.2020).



In contrast, Russia, with its government ownership of minerals, its mercurial control of taxes on exported gas, and its political influence on its domestic oil and gas companies, can much more easily manipulate the price of Russian gas. Gazprom is publicly owned, but the pressure the Putin regime can exert means that it sometimes acts with motives other than economic ones. In addition, while oil production and exportation in Russia are more tied to economic forces as the primary product of the Russian hydrocarbon industry, natural gas sits on the margin—a toy to be manipulated, not a GDP staple dependent on market forces<sup>30</sup>.

Obviously, Russia has geographic advantages as well, being both far closer to the EU and possessing outlets to the Baltic and Black Seas. NS2 is meant to accentuate this inherent benefit by bringing natural gas directly to industrial consumers and utilities in the most heavily populated portion of Europe located within its biggest and richest country.

#### 4. Passive and Active Steps

The first tenant of any American government desiring to support LNG exports to Europe should be to do no harm. This means not holding up federal approvals of LNG exportation terminals, as well as not actively hindering the completion and operation of pipelines. Although the increasingly activist judicial branch of America has proven more than capable of holding up development of pipelines<sup>31</sup>, the executive branch should not pressure agencies to hinder domestic infrastructure projects nor international trade.

Moving to the proactive, establishment of Free Trade Agreements (FTAs) with Poland and the Baltic states are needed. While the current American administration has not looked favourably upon some current FTAs such as NAFTA, it was open to superseding it with the USMCA – the US-Mexico-Canada Agreement, suggesting openness to other FTAs provided the flow of trade is at least initially favourable to the U.S.<sup>32</sup> Permits for the construction of LNG exporting facilities are required by

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30 Interview with Ben Semmes, LNG Trading Analyst (Jun. 15, 2020). See also Russia's Natural Resources Valued at 60% of GDP, <https://www.themoscowtimes.com/2019/03/14/russias-natural-resources-valued-at-60-of-gdp-a64800> (access 08.20.2020); See also D. Dediu et al., How Did the European Natural Gas Market Evolve in 2018?, <https://www.mckinsey.com/industries/oil-and-gas/our-insights/petroleum-blog/how-did-the-european-natural-gas-market-evolve-in-2018> (access 08.20.2020).

31 See generally P. Douglas, DAPL Ruling Accomplishes What It Should Have Prevented, <https://news.bloomberglaw.com/environment-and-energy/insight-dapl-ruling-accomplishes-what-it-should-have-prevented> (access 08.19.2020).

32 L. Teeboom, Negative Effects of Free Trade, <https://smallbusiness.chron.com/negative-effects-trade-5221.html#:~:text=Free%20trade%20is%20meant%20to,countries%2C%20and%20environmental%20damage%20globally> (access 9.12.2020).

the U.S. Department of Energy (“DoE”) through the Federal Energy Regulatory Commission (“FERC”). Permits are then required by DoE’s Office of Fossil Energy for the export of LNG to most countries. As provided for in Section 3 of the Natural Gas Act, anybody wishing to export LNG from America to a country without an FTA needs authorization from the Secretary of Energy. The Secretary shall then determine if the proposed LNG export is consistent “with the public interest” – a decision point subject to political whim. If found so, DoE then issues a conditional authorization. This authorization may be affected by subsequent applications, as DoE will continually scrutinize the cumulative effect of all approved exports on the American natural gas market. The potential impact that changing the permit could have on projects *after* construction concerns project lenders<sup>33</sup>. The establishment of FTAs with Poland and the Baltic states that prevent these permitting concerns would help facilitate future LNG trade.

A secondary goal of the U.S. and Polish/Baltic governments might be to fund studies inquiring as to the feasibility of development of locally-derived sources of natural gas from shale formations found in Poland and Lithuania and their neighbours located along the northern Carpathian shale belt. Prior tentative exploration has not been overly promising<sup>34</sup>, but continued cooperation between the U.S. Geological Survey, its local counterparts, and industry might prime future development as well as provide some measure of geopolitical leverage to the U.S. and Polish/Baltic governments and their respective regulated industries involved with natural gas import and distribution.

After that, more focused proactive steps avail themselves. American LNG projects are structured in any number of ways and this inherent flexibility means that American exporters have a good chance of becoming a swing supplier. For example, unlike in other countries, U.S. LNG tolling agreements generally do not have fixed destination clauses, allowing U.S.-sourced LNG cargoes to participate more freely in spot markets<sup>35</sup>. In addition, because American LNG export projects take years to go from planning to activation, they are not competing with current liquefied natural gas supplies, but for the gap that will exist in the future for new demand around the world. The responsiveness of the U.S. market and the idea that future demand in Europe exists at the right price bodes well for lasting LNG exports across the Atlantic.

In the Baltic states and Poland, filling that future gap with American LNG that can be resold without penalty away from shore should motivate the respective governments to actively encourage longer term purchase and sale contracts. They should recognize, however, that companies in the LNG trade primarily respond to

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33 B. Richards, *New Transport Options...*, *op. cit.*

34 Poland Overview, <https://www.eia.gov/international/analysis/country/POL> (access 08.19.2020).

35 See generally K. Marietta, *LNG Tolling Agreements (Export) – Key Considerations*, <https://lnghub.biz/lng-tolling-agreements-export-key-considerations/> (access 08.19.2020).

price and not entreaties or flats of governments. Therefore, the limited goal of direct federal backing should be to alleviate price concerns in order to push long-term contracts into reality. When new demand is forecast in Poland and the Baltic states, and the marginal cost of meeting that new demand is within a reasonable measure of the cost to fill that same demand with Russian gas, the American government, with the assistance of the importing country, could disperse a hedging subsidy. This subsidy would entice the importer and exporter to execute a purchase and sale agreement of a certain desired length. To be sure, recognizing economic realities is crucial. Therefore, the success of enticements to contract may hinge on keeping subsidies small and relatively unheralded.

## Conclusion

All the pieces are coming together in the countries bordering Russia for LNG imports and natural gas distribution among themselves. These expansion programs have been in response to increased domestic demand and will provide a means of reducing the Baltic littoral's reliance on Russian natural gas. The question is *if*—or under what conditions—*when* will contracted American LNG, and perhaps native European shale gas, step up to help provide energy security to the Baltic region? The first steps have been taken, with limited volumes of American LNG landing on a contract basis in Poland in the last couple years<sup>36</sup> and more planned for later<sup>37</sup>. The international energy market is dependent on prices and politics, and although it is almost impossible to predict the individual events that affect energy prices, North American LNG should flow to Europe in increasing quantities for the foreseeable future.

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36 See example A. Barteczko, Poland's PGNiG Receives LNG Delivery from U.S., <https://www.reuters.com/article/health-coronavirus-poland-pgnig/polands-pgnig-receives-lng-delivery-from-u-s-idUSL5N2CG6QW> (access 08.19.2020).

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