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# FROM FRACKING TO THE FERC TO FINLAND: AN OVERVIEW OF THE REGULATORY AND MARKET FACTORS IMPACTING THE EXPORT OF LIQUEFIED NATURAL GAS

*Jennifer L. Beresky\**

## INTRODUCTION

For the last sixty years, the United States has been a net natural gas importer.<sup>1</sup> Much of our natural gas trade is with our neighbors; we import a greater amount of natural gas via pipeline from Canada than exports to Mexico and Canada combined.<sup>2</sup> More recently, however, the gross exports of natural gas actually exceeded imports.<sup>3</sup> Much of this change was due to liquefied natural gas (LNG) exports which were not factored into export totals prior to January 2016.<sup>4</sup>

With the increasing capacity of pipeline infrastructure, there is immense potential for growth in the natural gas production industry in the Appalachian Basin, directly related to increased LNG exports.<sup>5</sup> For the first time in U.S. history, the

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<sup>1</sup> See U.S. ENERGY INFO. ADMIN., IN NEW TREND, U.S. NATURAL GAS EXPORTS EXCEEDED IMPORTS IN 3 OF THE FIRST 5 MONTHS OF 2017, Aug. 8 2017, <https://www.eia.gov/todayinenergy/detail.php?id=32392>.

<sup>2</sup> *Id.*

<sup>3</sup> Gross exports of natural gas exceeded imports in February, April, and May of 2017. *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> Kevin Petak, Hua Fang, & Michael Sloan, *The Future of Fuel: Opportunities in an Evolving Global Market*, ICF, (2016), <https://www.icf.com/resources/white-papers/2016/the-future-of-fuel>.

majority of natural gas production is not occurring in Texas or Louisiana, but is instead shifting to the Marcellus and Utica Shale states of Pennsylvania, Ohio, and West Virginia.<sup>6</sup> With an expanding pipeline network crossing the country, natural gas can be transported more quickly and safely from regions farther inland to export terminals on the coasts.<sup>7</sup> Such growth in takeaway capacity, and steady production here, means that the Appalachian Basin stands to directly benefit from increases in LNG exports.<sup>8</sup>

### I. CURRENT REGULATORY FRAMEWORK SURROUNDING LIQUEFIED NATURAL GAS EXPORTS

Just as interstate transport of natural gas is subject to regulation by the Federal Energy Regulatory Commission (FERC), so too is LNG export terminal approval and international transport.<sup>9</sup> The framework for regulating exports and imports of natural gas is found in § 3 of the Natural Gas Act (the Act), codified in 15 U.S. Code § 717b.<sup>10</sup>

The original purpose of the Act was to control price gouging by interstate pipeline companies.<sup>11</sup> The Act empowered the Federal Power Commission (now FERC) to set reasonable rates “for the transmission and sale of natural gas in interstate commerce.”<sup>12</sup> The authority previously given to the Federal Power Commission is now split between the Department of Energy (DOE) and FERC.<sup>13</sup> The DOE’s authority goes beyond interstate commerce and all imports and exports of natural gas, including LNG, require approval by the DOE.<sup>14</sup> The FERC’s jurisdiction ends at the LNG facilities, the same place it begins for the DOE’s Division of Natural Gas Regulation—a subgroup of the DOE’s Office of Regulation and International Engagement.<sup>15</sup> Accordingly,

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> 15 U.S.C.A. § 717b (West, Westlaw through Pub. L. No. 115-122).

<sup>10</sup> *Id.*

<sup>11</sup> U.S. ENERGY INFO. ADMIN., NATURAL GAS ACT OF 1938, [https://www.eia.gov/oil\\_gas/natural\\_gas/analysis\\_publications/ngmajorleg/ngact1938.html](https://www.eia.gov/oil_gas/natural_gas/analysis_publications/ngmajorleg/ngact1938.html).

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*; See *Division of Natural Gas Regulation*, DEPARTMENT OF ENERGY, <https://perma.cc/DXR9-VM4H>.

<sup>14</sup> See *Division of Natural Gas Regulation*, DEPARTMENT OF ENERGY, <https://perma.cc/DXR9-VM4H>.

<sup>15</sup> *Id.*

any company wishing to export natural gas must seek approval for the export from the DOE, which in essence is a trade control for energy security.<sup>16</sup>

Notably, there have been few revisions to the Act since its 1938 enactment.<sup>17</sup> Not only does the Act provide for DOE approval on the exports of LNG themselves (unlike most commodities, which are regulated either by the U.S. Department of Commerce or State) but the Act also authorizes the FERC to control the approval of import and export terminals.<sup>18</sup>

### *A. Approval Process for LNG Export Terminals*

Initial approval of an LNG export terminal requires several steps.<sup>19</sup> Any company wishing to construct an LNG export facility must first request that the FERC conduct a pre-filing environmental review, thus ensuring any potential issues with the application could be resolved as early in the process as possible.<sup>20</sup> The pre-filing procedures are also designed to fulfill the FERC's responsibilities under the National Environmental Policy Act (NEPA), ensuring that each proposal has the smallest environmental impact possible.<sup>21</sup> During pre-filing, members of the public and interested parties have the opportunity to offer input on the proposed project.<sup>22</sup> Therefore, in addition to conducting its own feasibility and cost investigations, a potential exporter must consider not only the time involved with public input, but must also identify potential stakeholders, before requesting that the FERC conduct a review of the proposed project within the NEPA pre-filing process.<sup>23</sup>

After review, the FERC may formally approve the pre-filing process.<sup>24</sup> Then, if appropriate, issue a pre-filing docket number to

<sup>16</sup> See Eric M. Hutchinson, *LNG Export Supporters Win Another Victory in Court*, THE NICKEL REPORT (Aug. 22, 2017), <https://perma.cc/A6X5-CRPU>.

<sup>17</sup> 15 U.S.C.A. § 717b, *supra* note 10.

<sup>18</sup> *Id.*

<sup>19</sup> See *Pre-Filing Environmental Review Process*, FEDERAL ENERGY REGULATORY COMMISSION, <https://perma.cc/DDA4-533G>.

<sup>20</sup> *Id.*

<sup>21</sup> See U.S. Gov't Accountability Office, *Natural Gas: Federal Approval Process for Liquefied Natural Gas Exports*, REPORT TO THE RANKING MEMBER, COMMITTEE ON ENERGY AND NATURAL RESOURCES, U.S. SENATE (Sept. 2014), <https://perma.cc/XKL2-84XS>.

<sup>22</sup> See *Pre-Filing Environmental Review Process*, *supra* note 20.

<sup>23</sup> See *id.*

<sup>24</sup> See *id.*

the applicant and begin officially reviewing the proposed project.<sup>25</sup> At this point, the company would conduct open houses to engage with members of the community who may be affected by the project.<sup>26</sup> These open houses are a series of meetings within the vicinity of the proposed projects and give those that may be affected an opportunity to voice their concerns.<sup>27</sup> Typically, the FERC will send members of the commission to attend open houses in order to answer questions from the public about the pre-filing procedure, what the community can expect from the FERC, and the project itself.<sup>28</sup> For the FERC to comply with its obligations under the NEPA during the pre-filing process, it must allow ample opportunity for public input.<sup>29</sup> Next, the FERC will issue notices of intent for preparation of either an environmental assessment (EA) or environmental impact statement (EIS), or prepare an EA in conjunction with FERC staff.<sup>30</sup>

At the same time, the FERC will open the NEPA scoping period to seek public comment on the proposed project and hold scoping meetings.<sup>31</sup> Like the open houses, the scoping meetings are an opportunity for the public to comment on the project, and for FERC agents to visit the proposed site and consult with interested agencies in the area (including state environmental agencies and zoning boards).<sup>32</sup> A draft of the EA or EIS will be provided to the cooperating agencies for their review.<sup>33</sup> The FERC will officially open the comment period and may hold meetings in the area for those who may be affected by the project.<sup>34</sup> Then, the FERC responds to comments received on the EA and may revise it, issue the final environmental investigation statement, and either approve or deny the project.<sup>35</sup> If the applicant is denied, the proponent can ask the FERC or a FERC administrative law judge to re-examine the case.<sup>36</sup>

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<sup>25</sup> *See id.*

<sup>26</sup> *See Gas Pre-Filing: Frequently Asked Questions*, FEDERAL ENERGY REGULATORY COMMISSION, <https://perma.cc/TFQ3-R26N> (last updated May 30, 2012).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> *See* 18 C.F.R. § 380.2 (Westlaw).

<sup>31</sup> *See Gas Pre-Filing: Frequently Asked Questions*, *supra* note 26.

<sup>32</sup> *Pre-filing Environmental Review Process*, *supra* note 20

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> *See Pre-Filing Environmental Review Process*, *supra* note 20.

<sup>36</sup> *Id.*

*i. Other agencies involved*

Though lengthy, it would at least be a relatively simple process if FERC approval was the only regulatory framework affecting LNG facilities and export projects. That, however, is not the case. If the FERC approves a proposal, the company still must obtain two permits from the Environmental Protection Agency before beginning construction.<sup>37</sup> In addition to the FERC regulating the construction of the LNG facility, potential exporters must seek DOE approval for the exports themselves, and comply with the regulations of both the Department of Transportation, via the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the United States Coast Guard's mandate of maritime security.<sup>38</sup>

The approval process is onerous, to say the least, but the following agencies all coordinate with one another through an Interagency Agreement under the umbrella of the Research and Special Programs Administration (RSPA) within the Department of Transportation.<sup>39</sup> First, the PHMSA is responsible for enforcing policies to ensure that both people and the environment are protected through safe pipeline practices and by setting guidelines for the transport of hazardous materials.<sup>40</sup> In the LNG process, PHMSA regulates the transportation of natural gas into LNG terminals via pipelines, and, after liquefaction, has authority over regulating onshore LNG facilities for the safe storage of gas.<sup>41</sup> Second, the U.S. Coast Guard is responsible for the licensing processes of offshore ports.<sup>42</sup> For any LNG facility located offshore,

<sup>37</sup> One permit must be secured under the Clean Water Act and Coastal Zone Management Act, and the other under the Clean Air Act. *Id.*

<sup>38</sup> See Federal Energy Reg. Comm'n., *Interagency Agreement among the Federal Energy Regulatory Commission United States Coast Guard and Research and Special Programs Administration for the Safety and Security Review of Waterfront Import/Export Liquefied Natural Gas Facilities*, FERC MEMORANDUM OF UNDERSTANDING (last visited Mar. 8, 2018), <https://www.ferc.gov/legal/mou/mou-24.pdf>.

<sup>39</sup> *Id.*

<sup>40</sup> See Pipeline and Hazardous Materials Safety Admin., *PHMSA's Mission*, U.S. DEP'T OF TRANSP. (Nov. 6, 2017), <https://perma.cc/ZQL5-YZS3>.

<sup>41</sup> See 49 U.S.C.A. § 60102(a) (Westlaw through Pub. L. No. 115-90) (PHMSA authority to "...prescribe minimum safety standards for pipeline transportation and for pipeline facilities." "Pipeline transportation" is defined by statute as "...transporting gas and transporting hazardous liquid." "Transporting gas" is further defined as "...the gathering, transmission, or distribution of gas by pipeline, or the storage of gas in interstate or foreign commerce...").

<sup>42</sup> See *supra* note 38.

the Maritime Administration issues the license.<sup>43</sup> For its review of LNG projects, the U.S. Coast Guard's regulations require that the same permits a potential exporter obtains following FERC approval are submitted with the application for a deep-water port license.<sup>44</sup> Third, the DOE has, in theory, trade control authority over the exports of LNG; in practice, this authority has largely been used for approvals, but the time taken to review applications for export orders is another hurdle exporters must overcome.<sup>45</sup> Fourth, the Environmental Protection Agency, as stated previously, issues permits to applicants if their proposals are in compliance with the Clean Water Act, Coastal Zone Management Act, and the Clean Air Act, prior to which, a facility cannot begin operating.<sup>46</sup>

In addition to these agencies' requirements, an applicant has to ensure compliance with state zoning and environmental regulations if located onshore or in inter-coastal waterways within an individual state's jurisdiction, which may be more burdensome than federal regulations.<sup>47</sup>

## II. LEGISLATIVE PROPOSALS FOR IMPROVING REGULATORY FRAMEWORK

In recent years, due to the convoluted regulation of the industry, increased demand for LNG exports, and the United States' desire to seize a greater portion of the global LNG market, legislators have begun offering proposals to improve the regulatory framework for LNG exports. Even though the following examples were not voted on in 2017, it is reasonable to expect similar, if not more expansive, proposals in 2018.

In June 2017, U.S. Senator Ted Cruz (Republican, Texas) announced the Natural Gas Export Expansion Act,<sup>48</sup> which aimed to expand natural gas exports by amending the Natural Gas

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> See Office of Fossil Energy, *Division of Natural Gas Regulation*, DEPARTMENT OF ENERGY (last visited Mar. 8, 2018), <https://perma.cc/DXR9-VM4H>.

<sup>46</sup> See *Pre-Filing Environmental Review Process*, *supra* note 20.

<sup>47</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, *Liquefied Natural Gas Regulatory Roadmap* (Nov. 2006), [https://www.epa.gov/sites/production/files/2015-08/documents/lng\\_regulatory\\_roadmap.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/lng_regulatory_roadmap.pdf).

<sup>48</sup> See Natural Gas Export Expansion Act, S. 1404, 115th Cong. § 1 (2017). [<https://perma.cc/Z6RU-TCL6>].

Act.<sup>49</sup> Section 717b of the Act provides the following three paragraphs:

(a) Mandatory authorization order

After six months from June 21, 1938, no person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the Commission authorizing it to do so. The Commission shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public interest. The Commission may by its order grant such application, in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate, and may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate.

(b) Free trade agreements

With respect to natural gas which is imported into the United States from a nation with which there is in effect a free trade agreement requiring national treatment for trade in natural gas, and with respect to liquefied natural gas—

(1) the importation of such natural gas shall be treated as a "first sale" within the meaning of section 3301(21) of this title; and

(2) the Commission shall not, on the basis of national origin, treat any such imported natural gas on an unjust, unreasonable, unduly discriminatory, or preferential basis.

(c) Expedited application and approval process

For purposes of subsection (a), the importation of the natural gas referred to in subsection (b), or the exportation of natural gas to a nation with which

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<sup>49</sup> *Id.*



there is in effect a free trade agreement requiring national treatment for trade in natural gas, shall be deemed to be consistent with the public interest, and applications for such importation or exportation shall be granted without modification or delay.<sup>50</sup>

Currently, the DOE must approve orders for every gas export.<sup>51</sup> Senator Cruz's proposal would insert a codified blanket exception that no order would be required for exports to Canada and Mexico. This would streamline the LNG process by permitting the DOE to redirect reviewing resources and, consequently, allow quicker review of export proposals to other countries.

In June 2017, U.S. Senator Bill Cassidy (Republican, Louisiana) introduced the License Natural Gas Now Act.<sup>52</sup> The proposal completely struck subsection (a) of the Natural Gas Act, outlined above, and instead permitted the DOE to grant an order to export "without modification or delay" upon application.<sup>53</sup> In essence, the order authorizing exports would become a rubber-stamp. For example, if a potential exporter complied with the remainder of the Act, by not attempting to export to a trade-restricted country, then the order would be given without delay. If adopted, this proposal would significantly reduce the review time for export applications—an issue that has been a concern for the past few Congresses, as there have been multiple proposals for bills imposing thirty-, forty-five-, or sixty-day limits on the DOE review prior to issuing an export order.<sup>54</sup>

The DOE published a notice of proposed rulemaking in September 2017, to revise its own regulations for issuing export authorizations, at the behest of the Trump administration.<sup>55</sup> The proposed change would mean that the DOE would issue an export

<sup>50</sup> *Supra* note 10.

<sup>51</sup> See Office of Fossil Energy, *Division of Natural Gas Regulation*, DEPARTMENT OF ENERGY (last visited Mar. 8, 2018), <https://perma.cc/DXR9-VM4H>.

<sup>52</sup> See *Cassidy Introduces LNG Now Act to Remove Unnecessary Restrictions on LNG Exports*, BILL CASSIDY, M.D., U.S. SENATOR FOR LOUISIANA (June 22, 2017), <https://perma.cc/Z79F-G4EC>.

<sup>53</sup> See License Natural Gas Now Act of 2017, S. 1465, 115th Cong. § 1 (2017), <https://perma.cc/9H4E-JPWF>.

<sup>54</sup> Timothy Cama & Cristina Marcos, *House passes bill to speed up liquefied natural gas exports*, THE HILL (Jan. 28, 2015), <https://perma.cc/Z6CA-RY2F>.

<sup>55</sup> DeSmog, *Trump Admin. Quietly Pushing 'Small Scale' LNG Exports That Avoid Environmental Reviews*, THE ENERGY COLLECTIVE (Sept. 13, 2017), <https://perma.cc/Q76C-335Q>.

authorization upon receipt of a completed exportation application to any country with which the U.S. did *not* have a free trade agreement, if not prohibited by U.S. law, provided that: (1) “[the] application proposes to export natural gas in a volume [no more than] 0.14 billion cubic feet (Bcf) per day (Bcf/d)”; and (2) the “DOE’s approval of the application does not require an environmental impact statement (EIS) or an environmental assessment (EA) under the National Environmental Policy Act of 1969 (NEPA),” meaning that the proposal would not have a significant human impact under NEPA guidelines.<sup>56</sup>

More recently, the U.S. House of Representatives’ Energy and Commerce Committee has taken up the issue of removing the DOE from the export approval process entirely, leaving the FERC’s approval as the final word on whether an export will be allowed.<sup>57</sup> Representative Bill Johnson (Republican, Ohio) introduced H.R. 4606 in December 2017, proposing the same modifications that the DOE rulemaking would enact — that exportation of natural gas under a 0.14 Bcf would be approved without modification or delay.<sup>58</sup> But the same Representative also introduced H.R. 4605, which would not only repeal restrictions on the export and import of natural gas, but also give the exclusive authority of export approval to the FERC.<sup>59</sup>

As Congress tries to move toward reducing the review time needed for export application approvals, the scrutiny given during DOE review has also attracted attention from opponents of both LNG exporting and new construction of LNG facilities.<sup>60</sup> Courts have generally concluded that the review conducted by the DOE during the application process was sufficient.<sup>61</sup> In *Sierra Club v. U.S. Department of Energy*, the U.S. Court of Appeals for the D.C. Circuit upheld a DOE issuance of an order for export from the Freeport Terminal on Quintana Island in Texas.<sup>62</sup> The petitioner argued that the DOE “failed to properly discharge its duties under the Natural Gas Act and National Environmental Policy Act of

<sup>57</sup> John Siciliano, *House GOP looks to give FERC final say on natural gas exports*, WASHINGTON EXAMINER (Jan. 19, 2018 1:04 PM), <https://perma.cc/BR9E-P362>.

<sup>58</sup> H.R. 4606, 115th Cong. (2017). [<https://perma.cc/S5CQ-87JD>].

<sup>59</sup> H.R. 46-5, 115th Cong. (2017). [<https://perma.cc/877Y-EA6R>].

<sup>60</sup> See *supra* note 48.

<sup>61</sup> *Sierra Club v. U.S. Dep’t. of Energy*, No. 15-1489, (D.C. Cir. Aug. 15, 2017) <https://perma.cc/2M9W-QZYM>.

<sup>62</sup> *Id.*

1969, in particular the duty to sufficiently analyze the indirect impacts of these exports resulting from the inevitable increase in domestic natural gas production as well as other effects resulting from the export of this product.”<sup>63</sup> The court disagreed, holding that there was a presumption in favor of exports unless the export would not be in the public interest.<sup>64</sup> Similarly, in a related set of cases decided two months earlier, *Sierra Club v. F.E.R.C. (No. 14-1249)* and *Sierra Club v. F.E.R.C. (No. 14-1275)*, the court held that the FERC’s orders were not arbitrary or capricious and that the FERC complied with the NEPA in exercising its authority under § 3 of the Natural Gas Act.<sup>65</sup> In each case, the court found that the scrutiny the DOE and FERC used to evaluate the environmental impacts of the LNG projects was sufficient.<sup>66</sup> Since the court also held in both instances that the Sierra Club did have standing to challenge the DOE and FERC’s findings, one would think it was not unreasonable to expect more litigation in the future from environmental groups with new LNG facility applications to the DOE. In a pending case in the D.C. Circuit Court, however, the Sierra Club requested to end its case against the DOE.<sup>67</sup> Given this abrupt change of course, it is possible future environmentalist challenges to LNG will not be directed at the level of scrutiny in the export approval process, but at other FERC and DOE actions.

### III. GLOBAL ENERGY DEMAND, MARKET PERSPECTIVES, CURRENT U.S. CAPACITY

Demand for natural gas worldwide is expected to increase from 120 to 203 trillion cubic feet (Tcf) per year by 2040.<sup>68</sup> In order to keep up with the market, LNG production is projected to nearly

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<sup>63</sup> Anthony B. Cavender, *DC Circuit Again Shuts Down Sierra Club’s Challenges to LNG Export Licenses*, LEXOLOGY (Aug. 22, 2017), <https://www.lexology.com/library/detail.aspx?g=eb95bc12-b558-4864-8bfa-771a25c0e639>.

<sup>64</sup> *Sierra Club v. U.S. Dep’t of Energy*, *supra* note 61.

<sup>65</sup> *Sierra Club v. Fed. Energy Regulatory Comm’n*, 827 F.3d 59, 70 (D.C. Cir. 2016); *Sierra Club v. Fed. Energy Regulatory Comm’n*, 827 F.3d 36, 49 (D.C. Cir. 2016).

<sup>66</sup> *Id.*

<sup>67</sup> Keith Goldberg, *Sierra Club Ends Fight Over DOE’s Approval of LNG Exports*, LAW 360 (Jan. 30, 2018, 5:41 PM), <https://www.law360.com/articles/1007235/sierra-club-ends-fight-over-doe-s-approval-of-lng-exports>.

<sup>68</sup> *International Energy Outlook 2016, Chapter 3: Natural Gas*, U.S. ENERGY INFO. ASS’N, [https://www.eia.gov/outlooks/ieo/pdf/nat\\_gas.pdf](https://www.eia.gov/outlooks/ieo/pdf/nat_gas.pdf) (last visited Feb. 20, 2018).

triple — from 12 to 31 Tcf worldwide — between 2015 and 2040.<sup>69</sup> It is news to no one that the price for natural gas has been lower than the industry would like over the past few years.<sup>70</sup> This is exacerbated in the LNG market because the facilities that have gone online in the last few years have enormous capacities and have consequently oversupplied the global market.<sup>71</sup>

The top five LNG exporting countries in 2016 were Qatar, Australia, Malaysia, Nigeria, and Indonesia.<sup>72</sup> The largest growing market for LNG was Asia, most notably China, India, and Pakistan.<sup>73</sup> So it would seem that the top exporters are well positioned geographically to best meet the rising demand for natural gas.<sup>74</sup> It was only in 2016, however, that the U.S. entered the LNG market with a 1.1 percent share and only one exporting terminal, the Sabine Pass.<sup>75</sup> With more terminals coming online, the market share for the U.S. is only expected to grow.<sup>76</sup>

As of January 2018, ten new LNG export terminals had been approved by the FERC.<sup>77</sup> These include the following, listed with their daily capacities:

- Hackberry, LA: 2.1 Bcfd (Sempra–Cameron LNG) (CP13-25)
- Freeport, TX: 2.14 Bcfd (Freeport LNG Dev/Freeport LNG Expansion/FLNG Liquefaction) (CP12-509) (CP15-518)

<sup>69</sup> *International Energy Outlook 2017*, U.S. ENERGY INFO. ASS'N 30 (Sept. 14, 2017), [https://www.eia.gov/outlooks/ieo/pdf/0484\(2017\).pdf](https://www.eia.gov/outlooks/ieo/pdf/0484(2017).pdf).

<sup>70</sup> See Huileng Tan & Akiko Fujita, *Natural Gas Oversupply Will Not Last Forever: Industry Executives*, CNBC (Apr. 3, 2017 7:54 PM), <https://www.cnbc.com/2017/04/03/natural-gas-oversupply-will-not-last-forever-industry-executives.html>.

<sup>71</sup> *Id.*

<sup>72</sup> *2017 World LNG Report*, INT'L GAS UNION 9 fig.3.2, [https://www.igu.org/sites/default/files/103419-World\\_IGU\\_Report\\_no%20crops.pdf](https://www.igu.org/sites/default/files/103419-World_IGU_Report_no%20crops.pdf) (last visited Feb. 20, 2018).

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> See John Krohn et al., *Growth in Domestic Natural Gas Production Leads to Development of LNG Export Terminals*, U.S. ENERGY INFO. ADMIN.: TODAY IN ENERGY (Mar. 4, 2016), <https://www.eia.gov/todayinenergy/detail.php?id=25232>; INT'L GAS UNION, *supra* note 72.

<sup>76</sup> *Id.*

<sup>77</sup> See *North American LNG Import/Export Terminals Approved*, FED. ENERGY REG. COMM'N (Jan. 24, 2018), <https://www.ferc.gov/industries/gas/indus-act/lng/lng-existing.pdf>.

- Cove Point, MD: 0.82 Bcfd (Dominion–Cove Point LNG) (CP13-113)
- Corpus Christi, TX: 2.14 Bcfd (Cheniere – Corpus Christi LNG) (CP12-507)
- Sabine Pass, LA: 1.40 Bcfd (Sabine Pass Liquefaction) (CP13-552)
- Elba Island, GA: 0.35 Bcfd (Southern LNG Company) (CP14-103)<sup>78</sup>
- Lake Charles, LA: 2.2 Bcfd (Southern Union – Lake Charles LNG) (CP14-120)
- Lake Charles, LA: 1.08 Bcfd (Magnolia LNG) (CP14-347)
- Hackberry, LA: 1.41 Bcfd (Sempra - Cameron LNG) (CP15-560)
- Sabine Pass, TX: 2.1 Bcfd (ExxonMobil – Golden Pass) (CP14-517)<sup>79</sup>

Given the increased capacity to come with these projects, the U.S. Energy Information Administration predicts that five plants, Sabine Pass and the four terminals that will be online by 2021, will have a combined operational export capacity of 9.2 Bcfd.<sup>80</sup>

Increased capacity for exporting, however, has many domestic energy consumers worried.<sup>81</sup> Manufacturers with factories that use a significant amount of natural gas are concerned that exporting more LNG will deplete natural gas supplies within three decades.<sup>82</sup> The Industrial Energy Consumers of America, an association representing manufacturers, called for Energy Secretary Rick Perry to stop approving further exports to non-free trade countries.<sup>83</sup> Earlier this year, the Australian

<sup>78</sup> *Id.*

<sup>79</sup> Notably, the last four have been approved but are not yet under construction.

*Id.*

<sup>80</sup> Katie Dyl, *Liquefied Natural Gas Exports Expected to Drive Growth in U.S. Natural Gas Trade*, U.S. ENERGY INFO. ADMIN.: TODAY IN ENERGY (Feb. 22, 2017), <https://www.eia.gov/todayinenergy/detail.php?id=30052>.

<sup>81</sup> See James Osborne, *Manufacturers Urge Perry to Slow LNG Exports*, HOUS. CHRON. (Aug. 26, 2017, 7:23 AM), <https://www.houstonchronicle.com/business/article/Manufacturers-urge-Perry-to-slow-LNG-exports-11825039.php>.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

government took steps to impose export controls.<sup>84</sup> Although, as noted above, Australia is the second largest LNG exporter in the world,<sup>85</sup> domestic gas prices in Australia were skyrocketing as the LNG exporting industry thrived.<sup>86</sup> Various economic models predict the same would happen to domestic prices if the U.S. continues to ramp up exporting, and of course there is the concern with depleting supply;<sup>87</sup> those crafting American energy policy will have to carefully weigh these factors going forward.

#### IV. THE IMPACT OF U.S.-RUSSIAN RELATIONS ON INDUSTRY AND GLOBAL OUTLOOK

It is an understatement to say the Trump administration's relationship with Russia has been roller coaster-like. But regardless of how the relationship is characterized, it is clear that our increase in LNG exports and concomitant entry into the global natural gas market poses a dramatic threat to Russian dominance of the European natural gas supply.<sup>88</sup>

The European Union imported 18.3 percent of its natural gas from Russia in 2016, while countries geographically closer to Russia imported even more.<sup>89</sup> Decreasing Europe's dependency on Russian natural gas could help to improve U.S. trade policy with the EU and diminish Russia's influence over the region.<sup>90</sup> With the current administration quietly setting new goals for strategic exports, this past summer, the U.S. sent its first shipments of LNG to countries with historical and economic importance to Russia.<sup>91</sup>

<sup>84</sup> *Id.*

<sup>85</sup> INT'L GAS UNION, *supra* note 72.

<sup>86</sup> Osborne, *supra* note 80.

<sup>87</sup> *Id.*

<sup>88</sup> See Roberta Ramptom & Timothy Gardner, *Trump to promote U.S. natgas exports in Russia's backyard*, Reuters (July 3, 2017, 2:57 PM), <https://www.reuters.com/article/us-usa-trump-lng/trump-to-promote-u-s-natgas-exports-in-russias-backyard-idUSKBN19O2AH>. [<https://perma.cc/YDA5-R49J>].

<sup>89</sup> See European Commissioner for Employment, Social Affairs and Inclusion, *Percentage of extra-EU imports (entries) of natural gas by country of origin* (July 20, 2017), [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Percentage\\_of\\_extra-EU\\_imports\\_\(entries\)\\_of\\_natural\\_gas\\_by\\_country\\_of\\_origin.png#file](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Percentage_of_extra-EU_imports_(entries)_of_natural_gas_by_country_of_origin.png#file). [<https://perma.cc/ME6L-5DDW>].

<sup>90</sup> See Ramptom & Gardner, *supra* note 87.

<sup>91</sup> See Agnia Grigas, *U.S. Natural Gas Arrives in Lithuania: What It Means for Russia and the Baltic Region*, FOREIGN AFFAIRS (Sept. 17, 2017), <https://www.foreignaffairs.com/articles/baltics/2017-09-12/us-natural-gas-arrives-lithuania>. [<https://perma.cc/MA7Z-5622>]

*A. Poland*

In June 2017, the first shipment of LNG from the U.S. arrived in Poland, marking an important shift in energy trade for the U.S., Poland, and European Union as a whole.<sup>92</sup> During winter months when natural gas usage is heavier, demand for Russian gas can spike, and in recent years, during times of discord between the EU and Russia, Moscow has threatened to turn off the gas.<sup>93</sup> Because of this uncertainty, the EU has long craved alternative supply sources, and countries with fraught histories with Russia, like Poland, would especially prefer to have natural gas available from other countries.<sup>94</sup>

To illustrate, Poland's estimated usage of natural gas in 2016 was about 16 billion cubic meters (bcm).<sup>95</sup> And in 2016, Russia's Gazprom<sup>96</sup> exported 11.07 bcm of natural gas to Poland, accounting for approximately seventy percent of Poland's total natural gas supply.<sup>97</sup> Not only is there increased predictability with importing U.S. LNG, but also, given that Russia practically has a monopoly on the markets in most of the former soviet bloc countries, U.S. exports could prove to be competitively priced, even with the additional costs of regasification not needed for Russian gas transported via pipeline.<sup>98</sup> This presents a huge market opportunity for American natural gas exporters, while simultaneously advancing U.S. foreign policy objectives.<sup>99</sup>

<sup>92</sup> See Robbie Gramer, *First U.S. Natural Gas Shipped to Poland*, THE CABLE (June 8, 2017, 4:28 PM), <http://foreignpolicy.com/2017/06/08/first-u-s-natural-gas-shipped-to-poland/>. [<https://perma.cc/M36J-ZPAJ>]

<sup>93</sup> See Ramptom & Gardner, *supra* note 87.

<sup>94</sup> See Mariusz Swora & Anna Mikulska, *U.S. LNG In Central And Eastern Eurpoe—Taking Diversification Seriously*, FORBES (July 11, 2017, 2:37 AM), <https://www.forbes.com/sites/thebakersistitute/2017/07/11/u-s-lng-in-cee-diversification/#35335e874d0a>.

<sup>95</sup> See Ian Brzezinski, *Poland's gas diversification: Nordic Dimension*, CENTRAL EUROPE ENERGY PARTNERS (Mar. 23, 2016), <https://www.ceep.be/polands-gas-diversification-nordic-dimension/>. [<https://perma.cc/3THU-2B4Q>].

<sup>96</sup> *About Gazprom*, GAZPROM.COM, <http://www.gazprom.com/about/> (last visited Feb. 18, 2018). [<https://perma.cc/S7Y6-NVXS>]

<sup>97</sup> *Foreign Partners*, GAZPROMEXPORT.RU, <http://www.gazpromexport.ru/en/partners/poland/> (last visited Feb. 18, 2018). [<https://perma.cc/NDF3-V55H>]

<sup>98</sup> Agnia Grigas, *supra* note 90.

<sup>99</sup> *Id.*

### *B. Finland*

Russia's neighbor to the northwest, as recently as 2016 was obtaining 100 percent of its natural gas from Russia.<sup>100</sup> But Finland's first LNG import terminal began operating in July 2016, and has already received deliveries of LNG.<sup>101</sup> This development freed Finland from relying entirely on pipelines from Russia for natural gas.<sup>102</sup> In fact, because Finland was entirely reliant on Russia, the European Commission supported Finland's contributing public funding to construct the terminal, because relieving Finland of dependence on Russian natural gas was in line with the EU's objective of improving security of the supply in the Baltic region.<sup>103</sup> Though none have gone to Finland yet, U.S. shipments have traveled to other countries in the region, making Finland a prospect for exportation consideration.<sup>104</sup>

### *C. Lithuania*

On August 2017, Lithuania received its first LNG shipment from the U.S.<sup>105</sup> The Lithuanian President, Dalia Grybauskaitė, reacted by saying, "U.S. gas imports to Lithuania and other European countries is a game changer in the European gas market. This is an opportunity for Europe to end its addiction to Russian gas and ensure a secure, competitive and diversified supply."<sup>106</sup> With the LNG infrastructure coming to Lithuania, and a planned terminal for Estonia as well, the Baltic States see U.S. LNG expansion as a way to diversify their energy sources away from Russia.<sup>107</sup>

<sup>100</sup> Daniel J. Graeber, *Europe helps fund non-Russia gas line for Finland*, UPI (Aug. 10, 2016, 7:58 AM), <http://www.upi.com/Europe-helps-fund-non-Russia-gas-line-for-Finland/6271470828765/>.

<sup>101</sup> See *Finland's first LNG terminal to get commissioning cargo*, LNG WORLD NEWS (July 7, 2016), <http://www.lngworldnews.com/finlands-first-lng-terminal-to-get-commissioning-cargo/>.

<sup>102</sup> See *id.*

<sup>103</sup> See *EU approves Finnish LNG terminal aid*, LNG WORLD NEWS (Mar. 18, 2016), <http://www.lngworldnews.com/eu-approves-finnish-lng-terminal-aid/>.

<sup>104</sup> *Id.*

<sup>105</sup> Agnia Grigas, *U.S. Natural Gas Arrives in Lithuania: What It Means for Russia and the Baltic Region*, FOREIGN AFF. (Sept. 12, 2017), <https://www.foreignaffairs.com/articles/baltics/2017-09-12/us-natural-gas-arrives-lithuania>.

<sup>106</sup> *Id.*

<sup>107</sup> See Swora & Mikulska, *supra* note 93.



### CONCLUSION

Given the market conditions worldwide, it is clear the U.S. has an important role to play in the LNG space. With increased takeaway capacity in pipeline networks, the natural gas producers in the Appalachian Basin stand to profit from greater exports of LNG. The supply that is already hitting the global market means the U.S. will become a dominant player, but it remains to be seen whether U.S. energy policy will keep pace with the demand, and whether legislators will make the process easier for exporters, or if LNG opponents will make it more difficult; most likely, we should expect a combination of both. In the process of economically benefiting companies in the Appalachian Basin, the U.S. also has a unique opportunity to improve its own energy security and that of its allies.