Out With the Old and In With the New: Modernizing Liquefied Natural Gas Regulations

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* J.D. Candidate, May 2015, University of Colorado Law School. I would like to thank my family and Drew for their continued love and support. I would also like to give special thanks to the late Dr. Michael J. Economides, from the University of Houston, for helping me develop this topic. Lastly, I greatly appreciate the dedicated staff at the Environmental Law Review.

I. INTRODUCTION

Testifying before the House Committee on Energy and Commerce in 2003, then Federal Reserve Chairman Alan Greenspan cautioned, "Today's tight natural gas markets have been a long time in coming, and futures prices suggest that we are not apt to return to earlier periods of relative abundance and low prices anytime soon."[1] By 2008, U.S. natural gas prices soared to a record high of $10.79 Mcf.[2] Entrepreneurs turned to Liquefied Natural Gas ("LNG") imports to satisfy demand. During this period, the Federal Energy Regulatory Commission ("FERC") received thirty applications to build LNG import terminals.[3] In 2009, the U.S. Department of Energy ("DOE") projected that natural gas prices would continue to increase for decades and that the U.S. would be dependent on natural gas imports to meet domestic demand indefinitely.[4] However, within one year that projection unexpectedly flipped.[5] Instead, natural gas prices in the U.S. plummeted to $2.98 Mcf by the end of 2009.[6]

This unexpected price decrease is attributable to technological advances that aid in the recovery of unconventional shale gas.[7] Advancement in horizontal drilling and hydraulic fracturing ("fracking") technologies has made it economically feasible to develop previously inaccessible shale gas reserves.[8] The process involves drilling down 1,000 to 12,000 feet, turning the drill horizontally, and drilling another

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1. *Natural Gas Supply and Demand Issue: Hearing Before the H. Comm. on Energy and Commerce*, 108th Cong. (2003) (statement of Alan Greenspan, Chairman of the Federal Reserve Board).

2. *U.S. Natural Gas Wellhead Price*, U.S. ENERGY INFO. ADMIN., http://www.eia.gov/dnav/ng/hist/n9190us3m.htm (last updated Sept. 30, 2014) [hereinafter *Natural Gas Wellhead Price*] Mcf is the abbreviation for 1,000 cubic feet of natural gas. *Frequently Asked Questions: What are Ccf, Mcf, But and Therms?*, U.S. ENERGY INFO. ADMIN., http://www.eia.gov/TOOLS/FAQS/FAQ.CFM?ID=45&T=8 (last updated May 19, 2014).

3. *See* Josh Lute, Note, *LNG Terminals: Future or Folly?*, 43 WILLAMETTE L. REV. 621, 642 (2007).

4. MICHAEL LEVI, THE HAMILTON PROJECT, A STRATEGY FOR U.S. NATURAL GAS EXPORTS 7 (2012), *available at* http://www.hamiltonproject.org/files/downloads_and_links/06_exports_levi.pdf.

5. *See* U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2010, 72–74 (2010).

6. *Natural Gas Wellhead Price*, *supra* note 2.

7. Conventional gas is typically found in porous rock that is easily released, whereas unconventional gas is found in relatively impermeable rock formations. The majority of the U.S.'s unconventional gas is shale gas, which exists in fine-grained sedimentary rock. John Deutch, *The Good News About Gas*, FOREIGN AFF., Jan./Feb. 2011, at 83–84.

8. *Id.* at 84.

several thousand feet.[9] Fluid is then injected at a high pressure creating tiny cracks, fracturing the shale and allowing the gas to escape.[10] Fracking technology has dramatically decreased the cost of producing shale gas and has enabled the recovery of enormous quantities of natural gas within the U.S.[11]

The abundance of cheap natural gas is attractive to foreign buyers. Natural gas prices range from $0.75 per MMBtu in Saudi Arabia. to $16 per MMBtu in Asia.[12] Traditional supply and demand forces set natural gas pricing in the U.S. marketplace, while in Asian and European markets, natural gas is linked to the price of oil. Consequently, it is substantially more expensive in these foreign markets than in the U.S. spot market for natural gas.[13] This price differential, combined with the increase in U.S. production capacity, has sparked overseas demand for U.S. LNG exports.

Converting natural gas to a liquid is the preferred method for transporting natural gas overseas. LNG is approximately 600 times smaller than in its gaseous state, making it easier to store large quantities and more economical to transport.[14] Once extracted, natural gas is transported to LNG export facilities where it is liquefied by cooling it to minus 260 degrees Fahrenheit.[15] The LNG is then loaded onto double-hulled ships for transport to LNG import stations, where it is converted back into a gas and eventually distributed to the end-user.[16] Currently, the U.S. has only one LNG export facility, operating in a limited capacity.[17] In order to meet and prosper from the demand for U.S. natural gas, the U.S. needs more LNG export facilities.

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9. *Id.*

10. *Id.*

11. *Id.*

12. U.S. ENERGY INFO. ADMIN., EFFECT OF INCREASED NATURAL GAS EXPORTS ON DOMESTIC ENERGY MARKETS 3 (2012), *available at* http://www.eia.gov/analysis/requests/fe/pdf/fe_lng.pdf [hereinafter EIA STUDY].

13. NICK CUNNINGHAM, AMERICAN SECURITY PROJECT, THE GEOPOLITICAL IMPLICATIONS OF U.S. NATURAL GAS EXPORTS 4 (2013). Historically, natural gas was produced as a byproduct of oil production, and natural gas prices tracked oil prices. Today, LNG importers, in the Asian and European markets, are operating on fixed contracts still linked to the price of oil, and are thus paying a premium for their gas. *Id.*

14. Office of Fossil Energy, *Liquefied Natural Gas*, U.S. DEP'T OF ENERGY, http://energy.gov/fe/science-innovation/oil-gas/liquefied-natural-gas (last visited Feb. 7, 2014).

15. *Id.*

16. *Id.*

17. *Existing FERC Jurisdictional LNG Import/Export Terminals*, FED. ENERGY REGULATORY COMM'N, http://www.ferc.gov/industries/gas/indus-act/lng/exist-term.asp

Applications to build facilities and to export LNG are flooding into the DOE and FERC, but approval has been devastatingly slow.[18] Slow approval is primarily attributable to the DOE's extended public interest review for exports to countries without a Free Trade Agreement ("FTA") with the U.S.—a process not required for FTA countries.[19] Because the majority of LNG-importing countries do not have a FTA with the U.S.,[20] almost all export applications undergo extended review. The sudden increase in non-FTA LNG export applications has caused interested parties on all sides to question the adequacy of the DOE's public interest review process. LNG exports present many unique environmental, economic, and national security concerns relevant to the public interest review. However, the DOE's public interest review is not entirely transparent, and in some instances, not relevant to the concerns. Overall, the DOE's public interest review is arbitrary as it relates to LNG exports.

Part I of this Note briefly explains the regulatory process that all LNG import and exports must undergo. Part II argues that the DOE's public interest review is arbitrary in three ways: first, the distinction between the FTA and non-FTA countries is irrelevant to the DOE's public interest review; second, the DOE has failed to establish any standardized criteria or review process relevant to the present-day public interest concerns of LNG exports; and third, in practice, it is not clear how, or if at all, the DOE weighs equally relevant public interest complaints. Part III of this Note discusses how the DOE's recent reforms fail to address or remedy the public interest problem. Part IV ultimately recommends congressional and regulatory actions to remedy this arbitrary public interest review and its effects. Specifically, Congress should remove the FTA distinction, and the DOE should issue a notice-

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(click on interactive map for import, export details) (last updated April 19, 2012) (showing that the Kenai, Alaska LNG terminal is the only terminal currently exporting LNG). LNG exports from the Kenai terminal are very different than export terminals proposed in the lower forty-eight. Natural gas producers in the Kenai had no "viable internal market reachable by pipeline" and were required to export natural gas for foreign markets. *See* Matt Salo et. al., *U.S. LNG Export Projects: Regulatory Outlook and Contracting Mechanisms*, 8 TEX. J. OIL GAS & ENERGY L. 61, 65 (2013).

18. Since September 7, 2010, the DOE has received 34 applications, but only 8 have been approved. *See Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States*, DEP'T OF ENERGY (Mar. 10, 2014), http://energy.gov/sites/prod/files/2014/03/f9/Summary%20of%20LNG%20Export%20Applications.pdf (listing the current status of all applications).

19. *See* Natural Gas Act of 1992, 15 U.S.C. § 717b(a),(c) (2005).

20. For example, the U.S. does not have a FTA with Japan, which is in desperate need of LNG after the Fukushima nuclear crisis. CUNNINGHAM, *supra* note 13, at 4.

and-comment rulemaking on factors relevant to the public interest as well as how the agency intends to balance them.

II. THE REGULATORY PROCESS FOR LNG EXPORTS

Two agencies regulate LNG exportation in the U.S: the DOE's Office of Fossil Energy authorizes LNG exportation[21] and FERC authorizes construction and expansion of LNG facilities.[22] If an LNG terminal already exists, the operating company does not have to obtain FERC approval but must obtain approval from the DOE to export LNG.[23]

A. FERC Regulation

FERC has authority over applications for siting, construction, expansion, or operation of LNG terminals.[24] FERC requires that a pre-filing NEPA review process begin at least six months before filing a formal application,[25] thereby allowing FERC to identify critical issues early in the process.[26] Once FERC approves the Pre-Filling Process, it issues a docket number to the applicant and begins reviewing the project.[27] The applicant then holds an "open house"[28] with the impacted community to share information about the proposed terminal.[29]

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21. *See generally* 15 U.S.C. § 717b. The Federal Power Commission, referenced in 15 U.S.C. § 717b, was terminated and its power was transferred to the DOE with the Department of Energy Organization Act. *See* Department of Energy Organization Act, Pub. L. No. 95-91, § 301, 91 Stat. 565, 577–78 (1977).

22. The DOE delegated authority over export terminal approvals to FERC. *See* Dep't of Energy Deleg. Order No. 0204-01 (Oct. 1, 1977) (rescinded), *available at* https://www.directives.doe.gov/delegations-documents/204.001.

23. *See* 15 U.S.C. § 717b(e)(1) (2005) (granting exclusive authority over siting, construction, expansion, or operation of an LNG terminal).

24. *Id.*

25. *See* Pre-Filing Procedures and Review Process for LNG Terminal Facilities, 18 C.F.R. § 157.21(a)(2)(i) (2014).

26. Matt Salo et. al., *U.S. LNG Export Projects: Regulatory Outlook and Contracting Mechanisms*, 8 TEX. J. OIL GAS & ENERGY L. 61, 91 (2012–13).

27. *See Pre-Filing Environmental Review Process*, FED. ENERGY REGULATORY COMM'N, http://www.ferc.gov/help/processes/flow/lng-1.asp (last visited Mar. 11, 2014) [hereinafter *Environmental Review Process*].

28. An "open house" is where the applicant company shares information about the project with the public. FERC sends representatives to the open house to "answer questions, discuss the FERC's pre-filing process, and invite stakeholders/public to participate in the environmental and certificate proceedings." *Frequently Asked Questions*

Upon the issuance of a notice of intent for preparation of an Environmental Impact Statement ("EIS") or Environmental Assessment ("EA"), a period for public comment begins.[30] FERC holds public scoping meetings and consults with interested agencies, as required by the National Environmental Policy Act ("NEPA").[31] The applicant may then file a formal application.

Once a formal application is filed, FERC and the applicant must prepare an EIS or EA. Typically, an EA is typically prepared first.[32] If FERC determines that there was a "finding of no significant impact," then the EA satisfies NEPA and an EIS is unnecessary.[33] If an EIS is required, it can take over a year to complete and can be hundreds of pages long.[34] FERC will then issue a Preliminary Draft EIS or EA and open a comment period before issuing its final determination.[35] If FERC approves the application, construction may begin.[36] If the application is denied, the applicant can either request that FERC reconsider or seek judicial review.[37]

B. DOE Regulation

Individuals seeking to export LNG from the U.S. must file an application with the DOE's Office of Fossil Energy. 10 C.F.R. §590.202 lays out the requirements and contents of the application. The application must contain the following: (1) the exact legal name of the company; (2) the name, title, mailing address, email address, and telephone number of individuals for correspondence; (3) a statement of purpose for the export; (4) justification as to why the action supports the public interest; and (5) the docket number, if applicable.[38] 10 C.F.R. 590.202(b) requires that all of the following information be included to the extent applicable, including support by the necessary data and documents:

(FAQs): Gas Pre-Filing, FED. ENERGY REGULATORY COMM'N, http://www.ferc.gov/help/faqs/prefiling.asp (last updated May 30, 2012).

29. *See Environmental Review Process*, *supra* note 27.
30. *Id.*
31. *Id.*
32. *Id.*
33. *Id.*
34. *See* Salo *supra* note 26, at 92.
35. *Environmental Review Process*, *supra* note 27.
36. *See* Salo *supra* note 26, at 92.
37. *Id.*
38. 10 C.F.R. § 590.202(a) (2014).

- Scope of the project, including volumes of natural gas involved, dates of commencement and completion, facilities to be used or constructed;[39]
- Source and security of natural gas supply, contract volumes, description of gas reserves supporting the project;[40]
- "Identification of all the participants in the transaction;"[41]
- Terms of the transaction (i.e., take-or-pay obligations, make-up provisions, etc.);[42]
- "The lack of a national or regional need for the gas;"[43]
- "The potential environmental impact of the project. To the extent possible, the application shall include a listing and description of any environmental assessments or studies being performed on the proposed gas project. The application shall be updated as the status of any environmental assessments changes."[44]

The applicant must also provide a statement, signed by legal counsel, verifying that the export is within the applicant's corporate powers.[45] Finally, the DOE may request the applicant to provide additional information at any time.[46]

After receiving the application, the DOE determines whether the proposed export is consistent with the U.S. public interest.[47] The Natural Gas Act requires the DOE to authorize the export unless it finds that the exportation "will not be consistent with the public interest."[48] The DOE's public interest analysis differs depending on whether or not the export is to a country with a FTA. The Natural Gas Act establishes that exporting LNG to a FTA country is "deemed to be consistent with the public interest" and such applications will be granted "without modification or delay."[49] As such, there is a conclusive presumption, which cannot be overcome, that LNG exports to FTA countries are in the

39. *Id.* § 590.202(b)(1).
40. *Id.* § 590.202(b)(2).
41. *Id.* § 590.202(b)(3).
42. *Id.* § 590.202(b)(4).
43. *Id.* § 590.202(b)(6).
44. *Id.* § 590.202(b)(7).
45. *Id.* § 590.202(c)
46. *Id.* § 590.202(d).
47. *See* 15 U.S.C. § 717b(a) (2012).
48. *Id.*
49. *Id.* § 717b(c).

public interest.[50] This presumption generally bars individuals from contesting an export application to a FTA country.[51]

However anyone can contest whether an export to a non-FTA country is consistent with the public interest. The DOE determined that there is a "rebuttable presumption that a proposed export of natural gas is in the public interest" and that such an application must be granted "unless those who oppose the application overcome the presumption."[52] Therefore, if the export is to a non-FTA nation, the DOE must give opponents of the application a chance to overcome the public interest presumption. The DOE publishes notices of application in the Federal Register, seeking comments, protests, and motions to intervene, to assist with its public interest determination.[53] The notice-and-comment period must last at least thirty days,[54] but the DOE's standard is typically sixty days.[55]

The major regulatory contention, and the focus of this Note, concerns the FTA, non-FTA distinction in the DOE's public interest review. It is not apparent how the public interest distinction is relevant to LNG export approval. Furthermore, the DOE's public interest review for non-FTA exports is vague and unpredictable.

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50. Courts have determined that the word "deemed" in a statute creates a conclusive presumption that cannot be overcome. *See, e.g.*, Mun. Resale Serv. Customers v. Fed. Energy Regulatory Comm'n, 43 F.3d 1046, 1053 (6th Cir. 1995), *accord* Westman Comm'n Co. v. Hobart Corp., 461 F. Supp. 627, 636 n.2 (D. Colo. 1978) ("A conclusive presumption means that if a fact is found which would negate the presumption, the fact may not be considered.").

51. Since exports to FTA countries shall be granted without modification or delay, 10 U.S.C. § 717b(c), they do not have to undergo a hearing or notice-and-comment period. *Id.*

52. Freeport LNG Dev. L.P., DOE/FE Order No. 2644, at 7 (May 28, 2009), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2009/ord2644.pdf.

53. 10 C.F.R. § 590.205(a) (2014).

54. *Id.*

55. *See, e.g.*, Cameron LNG, LLC; Application for Long-Term Authorization to Export Domestically Produced Liquefied Natural Gas to Non-Free Trade Agreement Countries for 20 Years, 77 Fed. Reg. 10,732, 10,735 (Feb. 23, 2012) (stating that 60 days would be granted due to the complexity of the matter); *see also* Sabine Pass Liquefaction, LLC; Application for Long-Term Authorization to Export Liquefied Natural Gas, 75 Fed. Reg. 62,512, 62,513 (Oct. 12, 2010); *see also* Lake Charles Exports, LLC; Application for Long-Term Authorization to Export Liquefied Natural Gas, 76 Fed. Reg. 34,212, 34,214 (June 13, 2011).

III. IS THE PUBLIC INTEREST ANALYSIS ARBITRARY?

There is a consensus among opponents and proponents of LNG exports that the DOE's public interest analysis is an arbitrary process, unrelated to LNG exports.[56] First, the distinction between FTA and non-FTA countries is arbitrary because the country of import is irrelevant to the public interest consideration. Second, the DOE selects criteria and reviews applications on a case-by-case basis without any standardized practice. Third, it is not clear how, or if at all, the DOE is weighing equal economic, geopolitical, and environmental concerns.

A. The FTA Distinction is Irrelevant to the DOE's Public Interest Review

When Congress adopted the FTA distinction in 1992, it was immaterial to LNG exports, and it remains trivial to the public interest analysis today. FTAs are congressional-executive agreements between the U.S. and a foreign country, in which the parties agree on trade terms.[57] The purpose of a FTA is to reduce barriers to U.S. exports, protect U.S. interests, and enhance the rule of law abroad.[58] Currently, the U.S. has fourteen FTAs with twenty countries.[59]

The FTA distinction is a regulatory relic that emerged during a time of energy scarcity and fears of domestic shortages.[60] The Energy Policy Act of 1992[61] amended the Natural Gas Act to include the FTA public interest distinction. At that time, the U.S. saw a nationwide natural gas

56. For instance, proponents hold that the DOE's public interest determination is a pointless obstacle causing unnecessary delays to approval. *See, e.g.*, Nicolas D. Loris, *U.S. Natural Gas Exports: Lift Restrictions and Empower the States*, 2767 HERITAGE FOUND. BACKGROUNDER 1, 6 (2013). Opponents assert that "[t]he topics DOE has identified for evaluating the public interest are too narrow and vague to capture all of the critical national, regional and local issues at stake with LNG exports or to offer any useful guidance." *See, e.g.*, *The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 22 (2013) (statement of Paul N. Cicio, President, Industrial Energy Consumers of America).

57. *U.S. Free Trade Agreements*, EXPORT.GOV, http://export.gov/fta/ (last updated Jan. 11, 2013, 11:01 AM).

58. *Id.*

59. *Id.*

60. MAJORITY STAFF OF H. COMM. ON ENERGY AND COMMERCE, 113th Cong., PROSPERITY AT HOME AND STRENGTHENED ALLIES ABROAD – A GLOBAL PERSPECTIVE ON NATURAL GAS EXPORTS, 8 (Comm. Print 2014) [hereinafter PROSPERITY AT HOME].

61. Energy Policy Act of 1992, Pub. L. 102-486, 106 Stat. 2776.

shortage and predominately imported natural gas. Congress added the FTA exception to expedite natural gas imports from Canada, a FTA country, to meet natural gas demand in the U.S.[62] The Congressional Record refers almost exclusively to Canadian natural gas.[63] Congress explicitly stated that the amendment "applies . . . to imports of Canadian natural gas into the United States; exports of natural gas to Canada from the United States; and imports of liquefied natural gas into the United States."[64]

Even though the goal was to expedite natural gas imports from Canada, it is unlikely that Congress could have implemented an exception for Canada alone. A specific rule targeted only at Canadian natural gas could have violated other FTAs. On the other hand, it was easier to obtain Congressional approval for the FTA distinction. A broad rule deeming all imports consistent with the public interest would have been too contentious and would have taken longer to pass the Congress. The solution was to apply an exemption to FTA natural gas imports and exports. As a result, LNG exports were thoughtlessly included under the FTA distinction so that the U.S. could facilitate natural gas imports from Canada.

Today, the role of the FTA distinction is arbitrarily applied between the DOE's FTA and non-FTA public interest reviews. The country importing LNG from the U.S. is entirely irrelevant from the DOE's public interest review for non-FTA exports. The DOE does not require the applicant to list to what countries it will export LNG. The applicant merely requests blanket approval to export LNG to any non-FTA country not prohibited by U.S. law or policy.[65] While the country from which the U.S. was importing natural gas was relevant to the U.S. public interest in

62. CRAIG SEGALL, SIERRA CLUB, LOOK BEFORE THE LNG LEAP: WHY POLICY MAKERS AND THE PUBLIC NEED FAIR DISCLOSURE BEFORE EXPORTS OF FRACKED GAS START 39 (2014).

63. The only other reference to countries other than Canada is a reference to the "Pacific rim nations." *See* H.R. REP. NO. 102-474 (1992) (Conf. Rep.), *reprinted in* 6 LEGISLATIVE HISTORY OF THE ENERGY POLICY ACT, 1992, at 4547, 4560 (1994).

64. *Id.*

65. *See, e.g.,* Application of Sabine Pass Liquefaction, LLC for Long-Term Authorization to Export Liquefied Natural Gas, FE Docket No. 10-111-LNG at 12 (Sept. 7, 2010), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2010/10_111sabine.pdf [hereinafter Sabine Pass App.] (first LNG non-FTA export approval); Application of LNG Dev. Co., LLC for Long-Term Authorization to Export LNG to Non-Free Trade Agreement Countries, FE Docket No. 12-77-LNG (Jul. 16, 2012) (most recent LNG non-FTA export approval, as of August 25, 2014).

the early 1990s,[66] such a query is irrelevant to the DOE today. Therefore, the public interest distinction for LNG export applications is an irrelevant and unnecessary byproduct of outdated natural gas import legislation.

Undoubtedly, the diplomatic status of the country importing LNG from the U.S. could be inconsistent with U.S. public interest whether or not there is a FTA. For instance, LNG exports to North Korea, a non-FTA country, would be directly inconsistent with U.S. national security interests. It is reasonable to presume that exports to FTA nations are inherently consistent with some U.S. public interests because FTAs decrease trade barriers, promote U.S. interests, and promote the rule of law.[67] Yet one could imagine how exporting LNG to a FTA country, would be more adverse to the public interest than exporting LNG to a non-FTA country. For instance, Colombia, a FTA country, would be more adverse to the public interest than exporting LNG to the United Kingdom, a non-FTA country. Accordingly, the distinction between FTA and non-FTA nations is arbitrary when the specific importing country is not considered under the DOE's public interest analysis.

Conversely, the nation importing LNG is the only relevant factor for FTA exports, since the DOE must approve LNG exports to FTA countries "without modification or delay." Congress has essentially determined that the basic benefits of FTAs are paramount to other public interest concerns. When applied to LNG exports, this is an arbitrary distinction because the nation importing LNG from the U.S. is not the only factor affecting U.S. public interest. As this Note addresses in Part III.C, there are a number of economic, environmental, and geopolitical issues unique to all LNG exports, regardless of their destination. Further, it is arbitrary that one factor—the country importing U.S. LNG—is the single most important factor for FTA exports, when that same factor is entirely irrelevant to non-FTA exports. Congress created an arbitrary distinction resulting in an arbitrary review process for LNG exports, and the DOE exacerbates this issue by relying on irrelevant policy guidance and criteria in its public interest review.

B. There is No Specific Criteria for Public Interest Review

Currently, the DOE has not developed specific criteria for its public interest analysis. In 2011, after strong political disagreements regarding

66. For example, the security of the foreign supply was an important factor for avoiding dependence on unreliable sources of supply. *See* New Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6,684, 6,685 (1984) [hereinafter New Policy Guidelines].

67. *See U.S. Free Trade Agreements*, *supra* note 57.

the public interest review, the DOE suspended further review of LNG export applications to non-FTA nations to conduct two studies. The studies, commonly referred to as the LNG Export Study,[68] explored the impact of LNG exports on domestic energy[69] and the macroeconomic effects of LNG exports.[70] However after researchers published the findings, Christopher Smith, the Acting Assistant Secretary for the Office of Fossil Energy, affirmed that there would be no exclusive criteria and that the DOE could evaluate all "relevant" issues raised by commenters and interveners.[71] An undefined list of criteria fails to assure that "[t]he DOE will consider all aspects of the public interest in any given proceeding."[72] Nor does it indicate how the DOE will weigh competing public interest concerns.[73] Further, it leaves interested parties without clarity concerning what information the DOE will consider relevant.

The DOE's actions have only aggravated the uncertainty surrounding the public interest analysis. For instance, the DOE refuses to consider public interest criteria it expressly identified as relevant. During a Congressional Hearing, Christopher Smith specifically listed environmental considerations as one public interest factor.[74] Yet the DOE has largely refused to consider environmental interests for every export application approved thus far. The DOE's refusal to provide

68. *See, e.g.*, Cameron LNG, LLC, DOE/FE Order No. 3391, at 4 (Feb. 11, 2014), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2014/ord3391.pdf [hereinafter Cameron Order] (referring to the EIA and NERA studies as the LNG Export Study).

69. *See generally* EIA STUDY, *supra* note 12.

70. *See generally* NERA ECON. CONSULTING, MACROECONOMIC IMPACTS OF LNG EXPORTS FROM THE UNITED STATES (2012), *available at* http://energy.gov/sites/prod/files/2013/04/f0/nera_lng_report.pdf [hereinafter NERA STUDY].

71. *See The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 46 (2013) (written statement of Christopher Smith, Acting Assistant Sec'y of Fossil Energy).

72. *Id.* at 22 (prepared statement of Paul N. Cicio, President, Indus. Energy Consumers of Am.).

73. For instance what aspects does DOE find to be more important to the public interest—economic or environmental? Based on DOE approvals thus far it appears that DOE weighs public interest concerns differently, giving more weight to economic advantages and little weight to environmental concerns. *See* discussion *infra* Part III.C.iii.

74. *See The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 46 (2013) (written statement of Christopher Smith, Acting Assistant Sec'y of Fossil Energy).

insight to its public interest criteria has increased uncertainty and decreased transparency in the entire application process.

Not only has the DOE failed to establish and define criteria, but it also supports its review with outdated and irrelevant policy guidelines. In 1984, the DOE promulgated a set of policy guidelines for natural gas imports.[75] The DOE's goals were the following: first, "[t]o minimize federal control and involvement in energy markets;" and second, "[t]o promote a balanced and mixed energy resource system."[76] The guidelines established that the DOE would give special attention to three factors: competitiveness of the import, domestic need for natural gas, and security of supply.[77] The DOE has since relied on these import guidelines while analyzing the public interest of LNG exports.[78] In the DOE's first approval order, Sabine Pass, the agency noted that these policy guidelines apply to natural gas export applications.[79]

The 1984 policy guidelines do not adequately address the unique public interest concerns of LNG exports. To illustrate this point, one need look no further than the fact that the 1984 import policy guidelines predate the FTA distinction.[80] Therefore, the DOE did not establish the guidelines with such a distinction in mind. Before 1992, the burden was on the applicant to show that the import was consistent with the public interest.[81] The 1984 Policy Statement includes guidance on how the DOE would determine if the applicant had met its burden.[82] Today, interested opponents have the burden of overcoming the public interest presumption. But opponents lack guidance concerning how the DOE will determine whether they have met their burden.

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75. *See generally* New Policy Guidelines, *supra* note 66.

76. *Id.* at 6,685.

77. *Id.* at 6,687.

78. *See, e.g.*, Phillips Alaska Natural Gas Corp. & Marathon Oil Co., DOE/FE Opinion and Order No. 1473, at 14 (April 2, 1999), *available at* https://www.ferc.gov/industries/gas/indus-act/angtp/doe1473.pdf.

79. *See* Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961, at 28 (May 20, 2011), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2011/ord2961.pdf [hereinafter Sabine Pass Order] ("While nominally applicable only to natural gas import cases, FE held in Order No. 1473 and in subsequent cases that the same policies will be applied to natural gas export applications.").

80. Order 6684 was issued in 1984 (*see generally* New Policy Guidelines, *supra*, note 66, at 6,684), whereas the FTA/ non-FTA distinction was not added until 1992 (*see* 15 U.S.C. § 717b (1992)).

81. *See* Panhandle Producers and Royalty Owners Ass'n v. Econ. Regulatory Admin., 822 F.2d 1105, 1107 (1987) (citing W. Va. Pub. Servs. Comm'n. v. DOE, 681 F.2d 847, 851 (D.C. Cir. 1982)).

82. *See* New Policy Guidelines, *supra* note 66, at 6,689.

Additionally, LNG exports raise unique economic, environmental, and strategic concerns that cannot be adequately addressed by outdated import guidelines. For example, LNG exports have a greater environmental impact on the U.S. than LNG imports. Likewise, "LNG imports reduce price and availability risks to domestic consumers, while exports increase these risks."[83] Outdated import guidelines are not relevant, reliable, or properly tailored standards for evaluating LNG exports.

C. The Public Interest Criteria is Not Applied Uniformly

As previously discussed, the DOE has not established relevant criteria or indicated what and how it will analyze public interest issues. The following section highlights some of the main public interest arguments and factors presented in LNG export applications, motions to intervene, and the DOE's opinions. The DOE has dismissed all opposing arguments despite the wealth of different means by which the export might be in conflict with the public interest. Therefore, it is difficult to truly understand how much weight the DOE affords any particular complaint or whether it considers any argument. The complaints exist in three broad categories: economic, geopolitical, and environmental.

i. Economic Issues

The DOE consistently relies on the findings of the LNG Export Study in its findings to overcome any arguments that LNG exports are inconsistent with the public interest.[84] The U.S. Energy Information Association ("EIA") study, part one of the LNG Study, concluded that increased natural gas exports would increase the price of domestic natural gas.[85] However, the National Economic Research Association ("NERA") study, the second part of the LNG Study, determined that

83. Freeport LNG Expansion, L.P. & FLNG Liquefaction, LLC, FE Docket No. 11-161-LNG, America's Energy Advantage, Inc.'s Consolidated Motions to Comment and Intervene Out of Time, at 6 (Sept. 18, 2013), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011_applications/AmericaEA11_161_lng09_18_13.pdf.

84. *E.g.*, Freeport LNG Expansion, L.P. & FLNG Liquefaction, LLC, DOE/FE Order No. 3282, at 110 (May 17, 2013), *available at* http://energy.gov/sites/prod/files/2013/05/f0/ord3282.pdf [hereinafter Freeport Order]; *see also* Lake Charles Exports, LLC, DOE/FE Order No. 3324, at 123 (Aug. 7, 2013), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2013/ord3324.pdf [hereinafter Lake Charles Order]; *see also* Cameron Order, *supra* note 68, at 130–31.

85. EIA STUDY, *supra* note 12, at 6.

increased LNG exports would create net economic benefits for the United States.[86] The DOE determined that these two studies together support the conclusion that the U.S. will experience net economic benefits and thus provides substantial support for export approval.[87]

According to the EIA, natural gas prices will rise regardless of whether LNG exports occur.[88] Depending on the amount of shale production, natural gas prices in the U.S. are projected to be anywhere from $4.47 to $8.23 per Mcf in 2030.[89] While the price will rise regardless, the potential impact of exports on wellhead price will depend on the rate and amount of exports. The EIA determined that:

[i]n the low/slow scenario, wellhead price impacts peak at about 14% ($0.70Mcf) in 2022. However, the wellhead price falls below 10 percent by about 2026.[90] In the high/rapid scenario, wellhead prices are about 36 percent higher ($1.58Mcf) in 2018 than in the no-additional-exports scenario. But the differential fall below 20 percent by about 2026. [91]

Applicants and protesters ultimately agree that natural gas prices will increase, but they disagree on the degree and impact. The applicants claim that exports will have a minimal impact on domestic natural gas prices.[92] Cameron LNG, LLC ("Cameron") contends "that any upward pressure on prices will be offset by a reduction in domestic price volatility."[93] Unsustainably low market prices have led producers to close uncompleted wells and defer drilling new wells.[94] Thus, when domestic demand peaks, additional gas supplies are not readily available,

86. NERA STUDY, *supra* note 70, at 6.

87. Cameron Order, *supra* note 68, at 130–31.

88. EIA STUDY, *supra* note 12, at 6.

89. *Id.* at 7.

90. *Id.* at 8.

91. *Id.*

92. Cameron LNG, LLC hired the independent consulting firm Black & Vetch to assess the impact of LNG exports on domestic natural gas prices. Application of Cameron LNG, LLC for Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Countries at 19–20, Cameron LNG, LLC, FE Docket No. 11-162-LNG (Dec. 21, 2011), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011_applications/11_162_lng.pdf [hereinafter Cameron App.] ("Black & Vetch found that an incremental 1.0 Bcfd increase in demand would increase United States average delivered natural gas prices by $0.085/Mcf in 2020, $0.088/Mcf in 2025, $0.078/Mcf in 2030 and $0.064/Mcf in 2035.").

93. *Id.* at 21

94. *Id.*

resulting in a price increase.[95] LNG exports will provide an additional market for domestic production, prompting exploration, development, and production when domestic demand is low.[96] When domestic demand spikes, producers will have the supply and flexibility to redirect natural gas supplies to the domestic market, as supplies are not "irrevocably dedicated to foreign destinations."[97]

Opponents, such as the American Public Gas Association ("APGA"), argue that LNG exports will substantially increase domestic natural gas prices.[98] The APGA highlights that the premise behind Cameron's application—that there are significant natural gas reserves to satisfy domestic demand—is no longer supported by recent studies. The EIA's Annual Energy Outlook ("AEO") 2012 now estimates that the "unproved technically recoverable resource of shale gas for the [U.S.] is 482 trillion cubic feet," compared to 827 trillion cubic feet estimated in AEO 2011.[99] Opponents further criticize the LNG Export Study for failing to consider several important factors in its domestic price analysis, such as regulatory or legislative actions.[100] The Industrial Energy Consumers of America ("IECA") argues that the "EIA price forecasts do not account for new natural gas demand that will occur as a result of the multiple EPA Clean Air Act related regulations that will create significant new demand for natural gas."[101]

Despite any increase in natural gas prices in the U.S., NERA determined that the U.S. would still experience a net economic benefit from LNG exports.[102] Natural gas revenues from exports would increase on an annual basis "from 2015 to 2035 between $14 billion and $32

95. DELOITTE, CTR. FOR ENERGY SOLUTIONS & MARKETPOINT LLC, MADE IN AMERICA: THE ECONOMIC IMPACT OF LNG EXPORTS FROM THE UNITED STATES 16 (2011), *available at* http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/Energy_us_er/us_er_MadeinAmerica_LNGPaper_122011.pdf.

96. *Id.*

97. *Id.*

98. *See, e.g.*, Motion For Leave to Intervene and Protest of The Am. Public Gas Ass'n at 6–10, Cameron LNG, LLC, FE Docket No. 11-162-LNG (Apr. 23, 2012) [hereinafter APGA Motion 162].

99. *Id.* at 7 (arguing that the new estimates are more reliable "due to improved data from producers as drilling has expanded in the Marcellus area").

100. Indus. Energy Consumers of America's Comment in Opposition of Approving LNG Export Application at 2, Lake Charles Exports, LLC, FE Docket No. 11-59-LNG (Aug. 12, 2011), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011_applications/cicio08_12_11.pdf [hereinafter IECA Comment in Opp.]; *see also* APGA Motion 162, *supra* note 98, at 10–11.

101. IECA Comment in Opp., *supra* note 100, at 2.

102. NERA STUDY, *supra* note 70, at 6.

billion over the AEO2011 Reference case."[103] Pursuant to these findings, the DOE held that the LNG Export Study "supports the proposition that the proposed authorization would not be inconsistent with the public interest."[104] Therefore, any public interest argument concerning increased domestic natural gas prices would have to debunk the entire LNG Export Study.

Applicants and intervenors also disagree about how LNG exports will affect employment. The DOE has concluded that LNG exportation practices could create hundreds of thousands of jobs.[105] Sabine Pass predicted that its application alone could indirectly create 30,000 to 50,000 permanent jobs in just the energy and production sector.[106] Cameron estimated that construction and operation of the export facility would generate 1.1 million jobs.[107]

In contrast, opponents maintain that the increase in natural gas prices in the U.S. between 2000 and 2008 contributed to a loss of 3.7 million jobs in the manufacturing sector and that continued price increases in the U.S. due to LNG exports could offset gains made elsewhere. [108] The APGA alleges that when energy prices increase, manufacturing jobs are especially lost in the fertilizer, plastics, chemicals, and steel industries.[109] The Sierra Club, relying on an Ohio State University Study, asserts that only 10,000 jobs were added in Pennsylvania between 2004 and 2010, fewer than the industry claims.[110] Once again, the DOE dismissed all claims that LNG exports will have a negative impact on employment.[111] The DOE consistently finds for the

103. EIA STUDY, *supra* note 12, at 16.

104. Freeport Order, *supra* note 84, at 110.

105. *See, e.g.*, Cameron Order, *supra* note 68, at 128.

106. Sabine Pass Order, *supra* note 79, at 30.

107. Cameron App., *supra* note 92, at 23.

108. Salo, *supra* note 26, at 79.

109. Cameron Order, *supra* note 68, at 53 (summarizing the APGA's comments).

110. Sierra Club's Motion to Intervene, Protest, and Comments at 14, Cameron LNG, LLC, FE Docket No. 11-162-LNG (Apr. 23, 2012), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011_applications/Sierra_Club_Cameron_MTI_Protest_and_Comm.pdf [hereinafter Sierra's Motion to Intervene]. DOE rejected this study because the years of the study were before the shale boom and coincided with a national economic recession. Cameron Order, *supra* note 68, at 128.

111. *See, e.g.*, Cameron Order, *supra* note 68, at 128; *see also* Sabine Pass Order, *supra* note 79, at 30; *see also* Lake Charles Order, *supra* note 84, at 90.

applicant, concluding that approval will result in regional economic benefits.[112]

Increasing natural gas prices can have major effects on manufacturers that rely on cheap natural gas prices. The IECA argues that manufacturers' competiveness is dependent on the price of energy relative to foreign competitors.[113] Energy-intensive manufacturers will have to outsource facilities to be competitive if energy prices are too high.[114] In response, LNG export supporters argue that imposing restrictions on LNG exports would "interfere with free commerce in one sector of the economy for the purported benefit of another."[115] The DOE sides with this argument in accordance with its 1984 policy guidelines.[116]

ii. Geopolitical Issues

LNG exports present a variety of geopolitical opportunities and concerns about the U.S.'s stability and relationships. The U.S. has the opportunity to improve national security because LNG exports will allow the U.S. to strengthen relationships with its allies and decrease the political power of hostile nations. However, opponents remain concerned that exporting LNG will deprive the U.S. of an opportunity for energy security. The U.S. must further be concerned that the FTA distinction potentially violates the U.S.'s obligations under other foreign trade agreements.

Applicants stress that LNG exports will forge significant national security advantages for the United States. First, LNG exports will bolster positive ties with foreign nations "by providing them with access to a reliable supply of alternative clean fuel."[117] Currently, a handful of countries monopolize the global market. A diverse and global natural

112. *See, e.g.*, Cameron Order, *supra* note 68, at 127–28; *see also* Sabine Pass Order, *supra* note 79, at 30; *see also* Lake Charles Order, *supra* note 84, at 90.

113. *The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 16–17 (2013) (statement of Paul N. Cicio, President, Indus. Energy Consumers of America).

114. *Id.*

115. Sabine Pass Order, *supra* note 79, at 24 (summarizing Sabine Pass's response).

116. *See, e.g.*, *id* at 28–29; *see also* Cameron Order, *supra* note 68, at 128–29 (arguing that Cameron's application will diversify markets).

117. Application of Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC For Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Countries at 34, Freeport LNG Expansion, L.P. & FLNG Liquefaction, LLC, FE Docket No. 10-161-LNG (Dec. 17, 2010), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2010_applications/10_161_LNGnfta.pdf [hereinafter Freeport App.].

market will promote the security interests for many nations.[118] For example, the European Union imports natural gas via pipeline from Russia and North Africa;[119] these supply chains are long and susceptible to turmoil and disruption.[120] A diverse supply will improve resilience to supply and demand disruptions.[121] Although the U.S. is not dependent on natural gas imports, it retains a stake in the energy security of its allies and other foreign nations. The energy and national security concerns of American allies significantly impact American security interests because "U.S. freedom of action in foreign policy is tied to global energy supply."[122] The U.S. can therefore strengthen its national security by providing energy security to its allies.

The strength of U.S.-ally relationships leads to the second national security advantage: exporting LNG will neutralize natural gas as a foreign policy weapon for corrupt nations that monopolize the industry.[123] The top LNG exporting nations are Russia, Iran, and Qatar,[124] all of which have strained relationships with the United States or its allies. Europe is highly dependent on Russian natural gas. For instance, Germany obtains forty percent of its natural gas from Russia,[125] the Czech Republic eighty percent, and Sweden one hundred percent.[126] Russia receives significant revenue from these natural gas contracts because they are linked to higher oil prices.[127]

Russia exploits Europe's dependency on natural gas imports as a foreign policy weapon. Without fear of retaliation, Russia has repeatedly severed natural gas supplies to Europe to strong-arm Ukraine during disputes.[128] In fact, Russia's 2014 invasion of the Ukraine's Crimean

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118. *Id.*

119. *Id.*

120. *Id.* For example, disagreements between Russia and Ukraine have caused natural gas cutoffs to Europe. Deutch, *supra* note 7, at 91.

121. Freeport App., *supra* note 117, at 34 (citing MASS. INST. OF TECH., ENERGY INITIATIVE REPORT ON THE FUTURE OF NATURAL GAS 70 (2010)).

122. *Id.*

123. Deutch, *supra* note 7, at 89.

124. *Id.* at 83.

125. *Id.* at 91. Germany's dependence on Russian natural gas will likely rise due to Germany's decision to shut down nuclear fleet. CUNNINGHAM, *supra* note 13, at 5.

126. Joseph Gates, *Russian Energy Weapon in Europe*, FREEDOM HOUSE (Mar. 10, 2014), http://www.freedomhouse.org/blog/russian-energy-weapon-europe#.Ux_sNbTvjww. Bulgaria, Estonia, Finland, Latvia, and Lithuania also receive 100% of their natural gas from Russia. *Id.*

127. Deutch, *supra* note 7, at 91.

128. *Id.* Russia has cut off natural gas supplies twice since 2006, and has currently threatened another shut off. *See* Gates, *supra* note 126.

region demonstrates Russia's confidence in exerting force within Europe. Russia is fully aware of Europe's reluctance to challenge its actions because Europeans have few options for their energy needs.[129] The U.S. could relieve Europe's dependence and counter Russian control by expediting LNG exports to Europe. House Speaker John Boehner proclaimed that "the ability to turn the tables and put the Russian leader in check lies right beneath our feet, in the form of vast supplies of natural energy."[130]

By increasing completion in the market, Russia will incur a significant revenue loss since it will no longer be able to acquire gas contracts linked to higher oil prices.[131] The U.S. has surpassed Russia as the world's largest natural gas producer,[132] so it has the potential to counter Russian natural gas exports. Imposing unnecessary barriers on LNG exports will allow countries like Russia to use natural gas to put political pressure on Europe.[133] In contrast, exports to American allies in Europe will boost their energy security and undercut Russia's political control.[134]

Opponents argue that the U.S. should pursue domestic energy security and independence over national security interests.[135] As part of the application process, applicants must demonstrate that there are adequate domestic supplies to satisfy domestic demand.[136] Applicants

129. Tom Cohen, *Ukraine Crisis: Sanction a Sticking Point Between U.S., Europe*, CNN, Mar. 7, 2014, http://www.cnn.com/2014/03/06/politics/ukraine-us-eu-stances/; *see also* John Boehner, *Counter Putin by Liberating U.S. Natural Gas*, WALL STREET J., Mar. 6, 2014, http://online.wsj.com/news/articles/SB10001424052702303824204579421024172546260.

130. Boehner, *supra* note 129.

131. Deutch, *supra* note 7, at 91.

132. *See* Claudia Assis, *Move Over, Russia. U.S. is Now the World's Biggest Oil and Gas Producer*, WALL ST. J. (Oct. 4, 2013, 1:12 PM), http://blogs.marketwatch.com/energy-ticker/2013/10/04/move-over-russia-u-s-is-now-the-worlds-biggest-oil-gas-producer/.

133. Deutch, *supra* note 7, at 90.

134. *See* CUNNINGHAM, *supra* note 13, at 6 ("European countries are making efforts to reduce Russian control over their energy markets, and U.S. LNG can accelerate this trend.").

135. *See, e.g.*, Motion for Leave to Intervene and Protest of the Am. Public Gas Ass'n at 5, Freeport LNG Expansion, LP & FLNG Liquefaction, LLC, FE Docket No. 10-161-LNG (Mar. 28, 2011) [hereinafter APGA Motion 161].

136. *The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 42–43 (2013) (statement of Christopher Smith, Acting Assistant Secretary of Fossil Energy) *available at* http://www.gpo.gov/fdsys/pkg/CHRG-113hhrg80386/pdf/CHRG-113hhrg80386.pdf.

assert that the U.S. natural gas reserves are more than sufficient to meet domestic demand for decades, even with substantial LNG exports.[137]

Still, intervening parties stress that the U.S. should pursue "a previously unimaginable opportunity" for U.S. energy independence.[138] The APGA suggests that the U.S. should expand the use of domestic natural gas to displace U.S. reliance on imported petroleum and coal.[139] For example, the APGA recommends replacing gasoline-powered vehicles with natural gas-powered vehicles.[140] It further asserts that the U.S. should preserve domestic energy stability.[141] While applicants argue that LNG exports will promote a liquid and stable market for American allies in Europe and Asia,[142] the APGA claims that exporting LNG will tie natural gas prices to an international market with high natural gas prices and volatile price fluctuations that will ultimately destabilize the domestic natural gas market.[143] Further, LNG exports would do little to stabilize global markets, as they would merely be a "proverbial 'drop in the bucket'" in comparison to the global natural gas market.[144] The APGA urges the DOE to proceed cautiously as natural gas supply predictions have not always proved accurate.[145]

In addition, it is uncertain how environmental and regulatory issues and local opposition to fracking and shale gas production will affect supply projections.[146] The APGA ultimately concluded that the opportunity for energy independence is an overriding public interest factor. After little consideration, the DOE found the APGA's arguments unpersuasive because the APGA failed to offer studies, evidence, or significant analysis to support its arguments.[147]

Outside of national and energy security issues, the FTA distinction potentially violates the U.S.'s obligations under other trade agreements. As a member of the World Trade Organization ("WTO"), U.S. restrictions on LNG exports potentially violate the General Agreement on Tariffs and Trade ("GATT"), Articles I and XI. Under Article I, WTO

137. Freeport App., *supra* note 117, at 26.
138. APGA Motion 161, *supra* note 135.
139. *Id.*
140. *Id.*
141. *Id.* at 7.
142. Freeport App., *supra* note 117, at 33–34.
143. APGA Motion 161, *supra* note 135, at 6.
144. *Id.*
145. *Id.* at 9
146. *Id.* at 8.
147. Freeport Order, *supra* note 84, at 109–10.

countries cannot discriminate between other WTO trading partners.[148] Article XI prohibits quantitative restraints on the exportation (or importation) of any product to another WTO country.[149] Together, the articles impose a duty on the U.S. to consider and grant exports to the WTO countries in a fair and equal manner. All FTA countries are part of the WTO, but not all WTO countries have FTAs with the U.S. Therefore, the DOE's discretionary approval for non-FTA WTO countries and automatic approval for FTA WTO countries appears to violate the U.S.'s GATT obligations.[150] Further, the restriction of LNG exports challenges the U.S.'s position as a promoter of free trade.[151] It is hypocritical for the U.S. to restrict LNG exports to WTO countries since the U.S. has brought charges against other WTO countries under GATT for restricting the exportation of natural resources.[152]

Applicants have been unable to persuade the DOE that the FTA distinction violates the U.S.'s obligations under the WTO and GATT. Sabine Pass requested that the DOE treat LNG exports to WTO Countries like FTA exports and approve the application without modification or delay.[153] Sabine Pass argued that it would be "inconsistent with U.S. obligations under the WTO Agreements to grant applications for export to countries with which the U.S. has FTAs while denying or treating in any discriminatory manner applications for exports to WTO Countries with which the U.S. does not have a separate FTA."[154] However, the DOE determined that neither law nor policy

148. *Principles of Trading Systems*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/thewto_e/whatis_e/tif_e/fact2_e.htm#top (last visited Mar 18, 2014).

149. General Agreement on Tariffs and Trade art. XI, Oct. 30, 1947, 55 U.N.T.S. 224 [hereinafter GATT] (stating "No prohibition or restrictions other than duties, taxes or other charges made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party").

150. Sabine Pass App., *supra* note 65, at Exhibit B 1.

151. Michael Ratner et. al., CONG. RESEARCH SERV., R42074, U.S. NATURAL GAS EXPORTS: NEW OPPORTUNITIES, UNCERTAIN OUTCOMES 14–15 (2013) (For example the U.S. brought a case against China for limiting the exportation of rare earths and other metals).

152. *Id.* at 15.

153. Sabine Pass App., *supra* note 65, at 23–33.

154. *Id.* at 24.

supported Sabine Pass's argument, so it had no basis for changing the standard of review.[155]

iii. Environmental Issues

The last group of public interest issues includes the potential environmental impacts related to LNG exports. However, the DOE has given little weight to most of these arguments because it is difficult to determine which environmental impacts are specifically attributable to LNG exports. Unlike the economic and domestic supply issues addressed in the LNG Export Study, the DOE has neglected to request a similar study on the environmental concerns associated with LNG exports.

The Sierra Club ("Sierra") has submitted the majority of the environmental concerns opposing LNG exports. Sierra argues that LNG exports will increase natural gas production, particularly unconventional shale gas.[156] Sierra asserts that increased natural gas production will environmentally impact air, water, and natural landscapes.[157] Sierra further argues that LNG exports will "lead to increased domestic gas prices, which will increase domestic coal use and consequent air and water pollution."[158]

Air pollutants emitted during natural gas operations can contribute to climate and public health concerns. For example, methane, the dominant pollutant, can be emitted through intentional venting or unintentional leaks.[159] Sierra is concerned that shale gas production produces significantly higher levels of methane than conventional wells.[160] The EPA estimated, in 2011, that conventional wells yielded 0.76 tons of methane emissions, while unconventional wells emit 150.6 tons of methane.[161] In a 100-year time frame, methane's global warming

155. Sabine Pass Liquefaction, LLC, FE Docket No. 10-111-LNG, Unnumbered Opinion and Order Denying Request for Review Under Section 3(c) of the Natural Gas Act, at 6–8 (Oct. 21, 2010).

156. Sierra's Motion to Intervene, *supra* note 110, at 14. Sierra cited findings from the EIA Study, predicting that 72% of the increase in domestic natural gas production would come from shale gas, 13% from tight gas, and 8% from coal-bed sources. *Id.*

157. *Id.* at 13.

158. *Id.* at 14.

159. *Id.* at 16. Unintentional leaks, also known as fugitive emissions, can occur throughout the drilling, production, processing, transmission, storage, and distribution process. *Id.*

160. *Id.*

161. Sierra's Motion to Intervene, *supra* note 110, at 16 (citing U.S. ENVT'L PROT. AGENCY, OIL AND NATURAL GAS SECTOR: STANDARDS OF PERFORMANCE FOR CRUDE OIL AND NATURAL GAS PRODUCTION, TRANSMISSION, AND DISTRIBUTION 2–4 (July 2011) *available at* http://www.epa.gov/airquality/oilandgas/pdfs/20110728tsd.pdf)).

potential is at least twenty five times that of carbon dioxide.[162] Sierra argued that "a warming climate will lead to increased incidence of respiratory and infectious disease, greater air and water pollution, increased incidence of respiratory and infectious disease, greater air and water pollution, increased malnutrition, and greater casualties from fire, storms, and floods."[163]

Sierra contends that natural gas production industrializes rural areas, disrupting natural landscapes and wildlife habitats.[164] The development of well pads, roads, pipelines, testing sites, and other infrastructure can occupy three to nine acres.[165] The transformation of the landscape results in direct and indirect habitat loss, threatening a range of species.[166] Sierra argues that increased production will have residual effects for "state's lands and wildlife, and the hunting, angling, tourism, and forestry industries that depend upon them."[167]

Fracking may also impact water resources through increased consumption and pollution. Fracking can require one to five million gallons of water per well.[168] Water withdrawal threatens aquatic ecosystems and risks permanent depletion.[169] Furthermore, fracking water typically contains chemicals that could contaminate ground and surface water, as the fluid can spill at the surface, leak through well casings, and migrate from the fracking site.[170]

Sierra argues that there are indirect environmental impacts due to fuel market shifts. Increased natural gas prices resulting from LNG exports will induce electricity generators to shift from gas to coal fired generation.[171] Increased coal generation will increase air pollutant and greenhouse-gas emissions.[172] The LNG Export Study agreed with this

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162. Sierra's Motion to Intervene, *supra* note 110, at 16.

163. *Id.* at 17.

164. *Id.* at 25.

165. *Id.* Sierra's estimates were based on a report by the Nature Conservancy that estimated the average acreage of natural gas well heads in Pennsylvania. *Id*. Sierra argued that although its studies and evidence relating to landscapes and habitats looked to Pennsylvania and New York, those effects still apply to other shale plays. *Id.* at 28.

166. *Id.* at 25, 27.

167. Sierra's Motion to Intervene, *supra* note 110, at 27.

168. *Id.* at 28.

169. SEGALL, *supra* note 62, at 11.

170. *Id.*

171. Sierra's Motion to Intervene, *supra* note 110, at 36.

172. *Id.*

assessment.[173] However, the LNG Export Study also found that the switch to coal would phase out over time as more renewables are integrated.[174] Further, the EIA found that "decreased natural gas consumption from added exports more directly results in decreased total energy consumption via the end-use consumer cutting back energy use in response to higher prices."[175] Still, decreased domestic natural gas consumption from exports increases overall CO_2 emissions.[176] Once emissions related to the liquefaction process are factored in, exports increase CO_2 levels in all scenarios.[177]

The DOE gives the least amount of attention and discussion to environmental concerns like Sierra's. In fact, the DOE does not even describe Sierra's environmental arguments[178] as the agency typically does with all other protester's public interest arguments.[179] Instead, the DOE contends that it will address environmental impact claims, as a cooperating agency, following FERC's review of the proposed LNG export facility.[180] Until recently, the DOE granted conditional approval subject to the completion of FERC's environmental review.[181] The DOE reasoned that a conditional approval avoids duplicative review between agencies.[182] However, as discussed below, FERC's environmental review also fails to consider most of Sierra's environmental impact claims.

While this Note has admittedly condensed Sierra's environmental arguments, Sierra's arguments tend to identify the potential effects of natural gas production in general, instead of citing the specific climate, air, land, water, and health effects of an increase in unconventional natural gas production attributable to an LNG export project.[183]

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173. *See* EIA STUDY, *supra* note 12, at 17–19 (reporting that "higher natural gas prices lead electric generators to burn more coal," which results in a net increase in overall carbon emissions).

174. *Id.* at 18

175. *Id.*

176. *Id.* at 19.

177. *Id.*

178. *See, e.g.*, Cameron Order, *supra* note 68, at 55 (opting not to describe Sierra's environmental impact claims since it will not address such claims until after FERC's environmental review).

179. *See, e.g., id.* at 49–54 (summarizing all of the APGA's arguments from APGA's Motion to Intervene and Protest).

180. *Id.* at 55.

181. *See, e.g., id.* at 6.

182. Freeport Order, *supra* note 84, at 121.

183. This is likely because there have been few studies or information produced related to the issue.

Cameron's answer to Sierra pointed to this discrepancy, noting that Sierra continually highlights the potential impacts of "general increased shale gas production."[184]

The argument that any general increase in natural gas production is inconsistent with the public interest is a "hard pill to swallow." Still, Sierra argues that infrastructure projects naturally expand upstream resource activities.[185] Therefore, the DOE and FERC must account for the cumulative environmental impacts of increased upstream production attributable to LNG exports.[186] However, in its Sabine Pass approval, FERC held that potential impacts from additional shale gas development were neither reasonably foreseeable nor attributable to the proposed project.[187] FERC explained that it is impractical to consider the impacts of additional shale gas development because it is impossible for applicants to identify from where and in what volume natural gas at an export terminal is from a specific shale gas field.[188] In response, Sierra argued that FERC's EA findings are inadequate and so the DOE must supplement the record to properly conduct the public interest review.[189] The DOE does acknowledge that, as a cooperating agency, it must conduct an independent assessment of FERC's NEPA review to determine whether the review must be supplemented.[190] However, the

184. Answer of Cameron LNG, LLC In Opp. to Sierra Club's Motion to Reply and Reply Comments at 6, Cameron LNG, LLC, FE Docket No. 11-162-LNG (June 7, 2012) *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/2011_applications/Answer_of_Cameron_to_MOR06_07_12.pdf.

185. Sierra's Motion to Intervene, *supra* note 110, at 55. As an example, Sierra provides *N. Plains Res. Counsel v. Surface Transp. Bd.*, where the court held that a NEPA analysis was illegal because it failed to consider the coal mine impacts for a coal railway line. However, the distinction between this case is that the rail line was built with the purpose of expanding coal production. The purpose of LNG export terminals is not merely to expand natural gas production, but sell excess natural gas.

186. *Id.* at 56.

187. Sabine Pass Liquefaction, LLC, 139 FERC ¶ 61,039, at para. 96, 98 (2012).

188. *Id.* at para. 97–98 (attributing this to the U.S.'s interconnected interstate natural gas pipeline system).

189. *See* Sierra's Motion to Intervene, *supra* note 110, at 12–16.

190. "DOE/FE is responsible for conducting an independent review of the results of the Commission's efforts and determining whether the record needs to be supplemented in order for DOE/FE to meet its statutory responsibilities under section 3 of the NGA and under NEPA." Sabine Pass Liquefaction, LLC, Order No. 2961-A, at 27 (Aug. 7, 2012), *available at* http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2010/Sabine_Pass_order_2961-A.pdf [hereinafter Sabine Pass Final Order].

DOE adopted FERC's determination that increased shale gas production is not a reasonably foreseeable effect.[191]

A residual effect of the DOE granting conditional approval and deferring environmental review was that environmental public interest claims are not weighed and balanced against all other public interest factors. Sierra argues that it is "irrational" to conduct a public interest review without considering environmental factors.[192] Environmental factors are essential to the DOE's decision, and so they must be weighed at the same time as all other public interest factors.[193]

Sierra presents valid environmental concerns.[194] Unfortunately, little research is tailored to the specific upstream impacts of LNG exports. Which raises the question of why the DOE or FERC have not requested a study on the potential environmental impacts related to LNG exports, as they did for economic and domestic supply concerns with the LNG Export Study.[195] In effect, the DOE is failing to consider all environmental arguments and so cannot properly conduct a public interest review. As discussed in Part IV of this Note, the DOE recently made several changes to address these issues, but the DOE's changes have no practical effect on the issues presented by Sierra.

D. Is Public Interest Review Just an Obstacle Causing Unnecessary Delay?

So far, no intervening opponent has been able to rebut the public interest presumption. In Sabine Pass's approval order, the DOE noted that an intervenor needed to provide factual studies to support their own arguments and to refute studies provided by the applicant.[196] However, the DOE has consistently held that the weight of the LNG Export Study

191. *Id.* at 28.

192. Sierra's Motion to Intervene, *supra* note 110, at 56.

193. *Id.*

194. *See, e.g.*, CHARLES EBINGER ET AL., THE BROOKINGS INST., EVALUATING THE PROSPECTS FOR INCREASED EXPORTS OF LIQUEFIED NATURAL GAS FROM THE UNITED STATES 7–15 (2012) (evaluating similar arguments and concerns).

195. In the DOE's final order for Sabine Pass it noted that it was aware of concerns about the environmental impacts of shale gas production, and that those concerns were being studied by federal agencies in participation with FERC. Sabine Pass Final Order, *supra* note 187, at 28 (citing Sabine Pass Order, *supra* note 77, at 32–33). However, the studies the DOE referred to were studies concerning the effects of fracking and not studies specifically related to LNG exports. *See* Sabine Pass Order, *supra* note 79, at 31–32 n.43.

196. Sabine Pass Order, *supra* note 79, at 19.

is greater than any study proposed by the intervenors. For instance, in the Lake Charles Exports ("LCE") order, although the APGA and the IECA provided substantial evidence, they did not "identify meaningful errors or omissions" in the evidence provided in LCE's application.[197] LCE relied on the LNG Export Study in its application, which the DOE finds "is fundamentally sound and supports the proposition that the proposed exports will not be inconsistent with the public interest."[198] Thus, the only way an intervening party could overcome the public interest presumption is to discredit the DOE's opinion of the LNG Export Study. Whether or not an intervening party provides sufficient supporting evidence, its argument is essentially irrelevant because the DOE always finds that the LNG Export Study supports LNG exports. The DOE is merely going through the motions of a public interest review because it is required by section 3(a) of the Natural Gas Act, but the DOE has already practically already determined, through the LNG Export Study, that LNG exports are consistent with the public interest.

Essentially, intervenors have only delayed approval by the DOE. During Sabine Pass's notice-and-comment period, the DOE received seven letters of support, five timely motions to intervene, and two untimely motions to intervene.[199] Of the five timely motions, only one motion—the IECA's submission—opposed Sabine Pass's application.[200] The DOE found that the IECA did not support any of its arguments with factual studies of analyses and failed to provide any studies to rebut those provided by Sabine Pass.[201] A single intervening opponent resulted in a review process that lasted 255 days.[202] In contrast, the DOE approved Freeport's application to qualifying FTA countries in just 29 days.[203] Until the DOE issues guidance on the specific materials that are sufficient to rebut the presumption or finds that an intervener has overcome the presumption, the public interest analysis appears to be a pointless obstacle at worst and an artificial transparency measure at best.

197. Lake Charles Order, *supra* note 84, at 123.

198. *Id.; see also* Freeport Order, *supra* note 84, at 110; *see also* Cameron Order, *supra* note 68, at 131.

199. *Id.* at 16–18.

200. *Id.* at 18.

201. *Id.* at 30.

202. The application was filed on Sept. 9, 2010 (*see* Sabine Pass App., *supra* note 65), and conditional approval was not granted until May 20, 2011 (*see* Sabine Pass Order, *supra* note 79).

203. Salo, *supra* note 26, at 73 n.83.

IV. RECENT DOE MODIFICATIONS

Upon publication of this Note, the DOE issued one procedural change and announced the compilation and expansion of several studies.[204] Practically, however, the DOE's modifications fail to resolve any problems with its public interest review. Thus, the DOE must still implement substantial reforms.

A. Suspension of Conditional Approval

In response to the environmental review concerns described above, the DOE suspended its practice of issuing conditional approval.[205] Instead, the DOE will issue final public interest determinations only after a completed NEPA review.[206] The DOE reasons that deferring review assures that each public interest factor is given full consideration.[207] Facially, this addresses some of the concerns raised by Sierra—that it is irrational to begin a public interest review without environmental factors.[208] Practically, however, this procedural change fails to address the arbitrariness of the review process and only decreases transparency.

The DOE claims that ending its bifurcated review will "*demonstrate* that each factor is given full consideration."[209] Yet, the change is an arbitrary demonstration because the measure has no way of assuring that the DOE fully considers each factor. In response to complaints that the new procedure would lengthen the DOE's review time, the DOE admitted that it would begin its review of other public interest factors and then wait for the NEPA review to conduct an environmental review.[210] Practically, the DOE is still using a bifurcated review process because

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204. *See* Procedures for Liquefied Natural Gas Export Decisions, 79 Fed. Reg. 48,132 (Aug. 15, 2014). *See also* Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States, 79 Fed. Reg. 48,132 (Aug. 15, 2014); Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States, 79 Fed. Reg. 32,260 (June 4, 2014); U.S. DEP'T OF ENERGY, REQUEST FOR AN UPDATE OF EIA'S JANUARY 2012 STUDY OF LIQUEFIED NATURAL GAS EXPORT SCENARIOS (2014) *available at* http://energy.gov/sites/prod/files/2014/05/f16/Request%20for%20Updated%20EIA%20Study.pdf [hereinafter EIA UPDATE].

205. Procedures for Liquefied Natural Gas Export Decisions, 79 Fed. Reg. 48,132.

206. *Id.*

207. *Id.* at 48,134.

208. *See supra* text accompanying notes 190–91.

209. Procedures for Liquefied Natural Gas Export Decisions, 79 Fed. Reg. at 48,134.

210. *Id.*

the DOE will continue to review environmental concerns separately.[211] Furthermore, the DOE and FERC will continue to rebuke the majority of the environmental factors because they concern upstream environmental effects.[212] The new procedure will consequently fail to improve the quality of information[213] because the DOE will continue to review and disregard the same environmental concerns. Delaying approval fails to improve the public interest review unless the DOE subsequently improves the quality of information available concerning the environmental impacts associated with LNG exports.

B. Request for the EIA Update to 2012 LNG Export Study

In addition to the procedural change, the DOE requested that the EIA update its portion of the 2012 LNG Export Study.[214] The first LNG Export Study analyzed the effects of LNG exports between 6 and 12 Bcf/d.[215] The DOE now wants the EIA to expand its analysis to include the potential impacts of LNG exports between 12 and 20 Bcf/d.[216] The EIA's analysis will "focus on the implications of additional natural gas demand on domestic energy consumption, production, and prices."[217]

The DOE's request for an update, although a step in the right direction, is incomplete. Since the 2012 LNG Export Study carries

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211. *See id.* (describing that under old procedures "DOE [would] focus on economic and international factors at the conditional decision stage and consider environmental factors at the final state, once NEPA review is complete").

212. *See* Order Granting Sabine Pass Liquefaction, LLC Section 3 Authorization, 139 FERC 61,039, 61,070–71 (Apr. 16, 2012) (refusing to consider upstream environmental effects because they are not reasonable foreseeable). *See also* Sabine Pass Final Order, *supra* note 190, at 27–28 (upholding FERC's Environmental Assessment because it examined all reasonably foreseeable impacts and concluding that induced shale gas production is not reasonably foreseeable); U.S. DEP'T OF ENERGY, ADDENDUM TO ENVIRONMENTAL REVIEW DOCUMENTS CONCERNING EXPORTS OF NATURAL GAS FROM THE UNITED STATES 2 (2014) [hereinafter ADDENDUM] (reinforcing its conclusion in its Sabine Pass approval that the environmental impacts of increased natural gas production are not reasonably foreseeable).

213. Procedures for Liquefied Natural Gas Export Decisions, 79 Fed. Reg. at 48,134.

214. *See generally* EIA UPDATE, *supra* note 204.

215. *See* EIA STUDY, *supra* note 12, at 1. Bcf is the abbreviation for 1,000,000 cubic feet of natural gas. *What are Ccf, Mcf, But and Therms?*, *supra* note 2.

216. *See* EIA UPDATE, *supra* note 204.

217. *Id.* Similarly, for the 2012 LNG Study, DOE asked EIA to analyze "how specified scenarios of increased natural gas exports could affect domestic energy markets, focusing on consumption, production and prices." EIA STUDY, *supra* note 12, at 1.

substantial weight in the DOE's public interest review,[218] the DOE should continue to update the study's findings. However, the EIA study represented only half of the 2012 LNG Export Study. The other half of the study, conducted by NERA, evaluated the macroeconomic impact of LNG exports on the U.S. economy.[219] The DOE has yet to request an update from NERA. The EIA and NERA studies cover different public interest issues[220] and must both be updated if the DOE continues to rely on the LNG Export Study. Updating the EIA study alone will result in an incomplete study, making the DOE's request, as it stands, insufficient and arbitrary.

C. Release of Environmental Documents

In its last action, the DOE called for the "release" of two environmental documents. One document, "Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States" ("Environmental Addendum"), compiled a review of the existing literature on the potential impacts of unconventional gas production.[221] The other document, "Life Cycle Greenhouse Gas Perspective on Exporting LNG from the United States" ("LCA GHG Report"), calculates greenhouse-gas emissions for regional coal and imported natural gas in Europe and Asia.[222]

In the Environmental Addendum, the DOE admitted that "environmental concerns associated with unconventional natural gas production are of public interest."[223] Yet, the DOE made it abundantly clear that it would not consider the information contained in the Environmental Addendum in its public interest review. The DOE repeatedly stated that the Environmental Addendum was beyond NEPA requirements.[224] Since the Environmental Addendum will not be considered in a NEPA environmental review, the DOE is not required to

218. *See supra* note 195 and accompanying text.

219. *See generally* NERA STUDY, *supra* note 70.

220. The EIA study focuses on the domestic energy supply market (*see* EIA STUDY, *supra* note 12, at 1) while the NERA study focuses on the macroeconomic effects of LNG exports on the U.S. economy (NERA STUDY, *supra* note 70, at 3).

221. ADDENDUM, *supra* note 212, at 2.

222. NAT'L ENERGY TECH. LAB., U.S. DEP'T OF ENERGY, LIFE CYCLE GREENHOUSE GAS PERSPECTIVE ON EXPORTING LIQUEFIED NATURAL GAS FROM THE UNITED STATES (2014) [hereinafter LCA GHG REPORT].

223. ADDENDUM, *supra* note 212, at 3.

224. *See, e.g.*, *id.* at 2; *see e.g.*, Addendum to Environmental Review Documents Concerning Exports of Natural Gas From the United States, 79 Fed. Reg. 48,132 (Aug. 15, 2014).

consider the information in its public interest review.[225] The DOE additionally stated that the purpose of the Environmental Addendum is to provide the public with information regarding the environmental impacts of unconventional natural gas production.[226] The DOE refused to state that the purpose was to compile information relevant to its public interest review.[227] In fact, the DOE concluded that it would be unreasonable to assume that the potential environmental impacts associated with unconventional natural gas production are directly related to non-FTA LNG exports.[228] Finally, the DOE stated that it could not "meaningfully" estimate, analyze, or consider the information contained in the Environmental Addendum.[229] As the DOE previously explained in its Sabine Pass order, the agency concluded that environmental impacts induced by LNG exports are not reasonably foreseeable.[230]

The Environmental Addendum fails to address any of the problems with the DOE's current environmental public interest review. The DOE is still failing to weigh environmental factors against all other public interest factors. The DOE needs to make a substantive attempt to gather information about the environmental public interest factors and request an environmental study similar to the LNG Export Study. The Environmental Addendum was not a meaningful attempt to consider the environmental impacts relevant to the public interest review, but rather an arbitrary gesture to respond to public discontent.[231]

The DOE's second environmental document—the LCA GHG Report—concluded that "the use of U.S. LNG exports for power production in European and Asian Markets will not increase GHG emissions, on a life cycle perspective, when compared to regional coal extraction and consumption for power production."[232] The DOE has not yet reviewed comments and issued its final report.[233] What remains to be seen is whether the DOE is more willing to apply the LCA GHG Report

225. *See supra* note 190 and accompanying text.

226. *See* ADDENDUM, *supra* note 212, at 2–3 (explaining that the purpose of the Addendum was to provide the public with a "more complete understanding" and "additional information" about the potential environmental impacts).

227. *See id.* at 1–3.

228. *See id.* at 2 (stating that it is unreasonable to assume that "potential impacts will not occur if natural gas exports to non-FTA countries are prohibited").

229. *See id.*

230. *Id.*

231. *See* ADDENDUM, *supra* note 212, at 3 ("While not required by NEPA, DOE has prepared this Addendum in an effort to be responsive to the public . . .").

232. LCA GHG REPORT, *supra* note 222, at 18.

233. As of September 1, 2014.

findings than the Environmental Addendum findings to its public interest review, since the LCA GHG Report supports LNG exports.

The DOE's recent modifications do nothing to resolve its arbitrary review process. First, delaying approval merely disguises the DOE's bifurcated public interest review as a single public interest review. Environmental public interest claims are still not being weighed and balanced against all other public interest factors. Second, a partial update of the LNG Export Study fails to strengthen the DOE's continued reliance on the LNG Export Study. Third, the DOE's continued refusal to consider compiled environmental literature excludes most environmental factors from its public interest review. Accordingly, the recommendations, described in detail below, are still necessary to eradicate the DOE's arbitrary public interest review.

V. RECOMMENDATIONS

A. Recommendations for Congressional Action

Congress should remove the public interest distinction between the FTA and non-FTA countries. The FTA, non-FTA distinction has little relevance in the public interest determination. LNG exports to the FTA countries are arbitrarily presumed to have no substantial environmental, economic, or national public interest concerns. Furthermore, since the DOE has yet to deny any export application, the FTA distinction has merely resulted in an extended review process for exports to non-FTA countries. The DOE continually gives the LNG Export Study deference over any alternative study presented by opponents. These realities establish that the distinction has become a pointless obstacle. The original purpose for the distinction—to increase natural gas imports from Canada—is irrelevant to the purposes of exporting LNG to other countries. Thus, Congress should revisit the public interest distinction in the Natural Gas Act.

There are two paths forward, each on a different end of the spectrum. On one hand, Congress could expand the public interest analysis to all LNG exports, regardless of their destination. In contrast, Congress could simply remove the public interest distinction from the Natural Gas Act and deem that all LNG exports are consistent with the public interest. This strategy would ultimately remove the public interest review process altogether.

Several bills have already been presented in the House of Representatives and the Senate that would effectively remove the

distinction.[234] H.R. 1189, the American Natural Gas Security and Consumer Protection Act, proposed to prohibit the exportation of all natural gas from the U.S. to any foreign country, including FTA countries, without first obtaining the approval of the Secretary of Energy.[235] The Secretary can authorize exports if it is consistent with the public interest, which requires a NEPA review and a consideration of the effects of natural gas exports on eleven different factors, including: household and business expenditures; U.S. economy, jobs, and manufacturing; energy security; conservation of domestic natural gas supplies; volume of natural gas produced on public lands; and any other issue determined by the Secretary.[236] H.R. 1189 would effectively remove the FTA distinction and require a public interest review for all LNG exports. In an encouraging step forward, the bill identifies factors relevant to the public interest determination, however, it remains in the DOE's discretion to determine how it will analyze and balance any competing factors. Still, the bill would prevent the DOE from considering whether applications are consistent with the public interest on a case-by-case basis and absent guiding principles. The bill requires that the DOE issue final regulations for determining whether an LNG export is consistent with the public interest following a notice-and-comment period.[237]

The Expedited LNG for American Allies Act of 2013, takes somewhat of a middle ground and proposes to expand the FTA presumption to include NATO countries, Japan, and any other nation the Secretary of State determines would promote the national security interests of the U.S.[238] This bill would effectively remove the public interest analysis for most LNG export applications because Japan is one of the largest LNG importers,[239] and most European NATO countries are also highly dependent on imported natural gas.[240] If this bill had passed,

234. *See* H.R. 1189, 113th Cong. (1st Sess. 2013). *See also* Keep American Natural Gas Here Act, H.R. 1191, 113th Cong. (1st Sess. 2013); Expedited LNG for American Allies Act, S. 192, 113th Cong. (1st Sess. 2013) and H.R. 580, 113th Cong. (1st Sess. 2013).

235. H.R. 1189, § (2)(A).

236. H.R. 1189, § (3)(B)(aa)–(jj).

237. H.R. 1189.

238. The Act was concurrently introduced in the U.S. House and Senate. S. 192, 113th Cong. (1st Sess. 2013); H.R. 580, 113th Cong. (1st Sess. 2013).

239. CUNNINGHAM, *supra* note 13, at 6.

240. For example, Germany, Bulgaria, Estonia, Latvia, Lithuania, and the Czech Republic are all NATO countries and rely heavily on natural gas imports from Russia. *See NATO Member Countries*, N. ATL. TRADE ORG., http://www.nato.int/

the number of LNG export applications undergoing a public interest determination would decrease dramatically.

A third and less clear proposal is H.R. 2471, the Expedite Our Economy Act of 2013.[241] This bill proposed to transfer all of the DOE's regulatory authority over natural gas exports to FERC[242] and required FERC file a report on the state of global natural gas exports within 180 days of the bill's passage.[243] This is a broad delegation of power with essentially no guiding or limiting principles.[244] However, based on the title of the bill and its sponsors,[245] it appears that the sponsors assume that FERC would do little to regulate LNG exports.

To maximize the U.S.'s energy advantage, Congress should consider legislative reforms that will expedite the export approval process. The general consensus of the DOE's export approvals and the LNG Export Study is that the economic benefits of LNG exports outweigh the costs. The geopolitical benefits of LNG exports provide additional incentives to expedite LNG exports[246] but the longer Congress waits to act, the smaller these benefits become.[247] In order for the U.S. to realize the benefits of LNG exports, Congress must accelerate the regulatory review process.

Since the balance of economic, geopolitical, and environmental costs and benefits are always changing, Congress should not remove the public interest review altogether. Instead, Congress should enact legislation like the Expedited LNG for American Allies Act, which

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cps/en/natolive/nato_countries.htm (last updated Mar. 2, 2014); *accord* Gates, *supra* note 126.

241. H.R. 2471, 113th Cong. (1st Sess. 2013).

242. H.R. 2471, § 2(a) & (b).

243. H.R. 2471, § 3.

244. The absence of guiding or limiting principles presents a possible constitutional violation under the nondelegation doctrine. *See* LEGAL INFO. INST., *Nondelegation Doctrine*, CORNELL UNIVERSITY LAW SCHOOL, http://www.law.cornell.edu/wex/nondelegation_doctrine (last visited Mar. 21, 2014) (describing the nondelegation doctrine).

245. The bills' sponsors are Representative Ted Poe, R-TX, and Representative Dave Hall, R-OH. H.R. 2471.

246. The main geopolitical benefits include: strengthening ties with allies and trading partners, and controlling the foreign policy influence of other energy exporters like Russia. *See supra* Part III.C.ii.

247. *See* PROSPERITY AT HOME, *supra* note 60, at 2 ("America's window of opportunity will not remain open for long. In the face of continued delays, nations with near-term energy needs will be forced to look elsewhere for supplies, LNG facilities will have difficulty securing financing in an uncertain regulatory environment, and America will see greater completion from other LNG exporters.").

would expand the FTA presumption to other countries and groups of countries. Legislation that expands the public interest presumption to the WTO countries and NATO countries addresses concerns about possible GATT violations. Further, authorizing the Secretary of State to expand the presumption to any other country that would promote U.S. national security interests helps address situations like the one in Ukraine.

In contrast to the Expedited LNG for American Allies Act, Congress should not determine which countries to expand the presumption to, but instead delegate the decision to a regulatory agency. Currently, the Expedited LNG for American Allies Act gives the Secretary of State some authority to expand the FTA presumption. However, vesting the Secretary of State with that authority preemptively determines that national security interests override all other concerns. Congress should at least require that the Secretary of State expand the presumption to countries that it determines would promote U.S. public interest and not just the national security interest. In this respect, the DOE might be a more appropriate regulatory agency to consider interests beyond national security.

Ultimately, by not listing any countries in the legislation, the regulatory agency will be able to remove the presumption from all countries should circumstances change. For example, if the U.S. begins to experience domestic supply issues or devastating environmental impacts, the DOE could determine that all exports must go through a public interest review. Further, Congress should require the DOE to conduct periodic economic and energy supply studies, similar to the LNG Export Study, so that the DOE will be able to make informed decisions about whether continued exports, in general, are consistent with the public interest. Congress should also require the DOE to commission periodic studies on the environmental impacts of LNG exports.

B. Recommendation for the DOE

Removing the FTA distinction alone does not solve the problem. Whether or not Congress removes the public interest distinction, the DOE must still articulate standards relevant to the broad range of LNG export public interest factors. Without well-defined criteria, interested parties will remain unsure of how they can challenge the public interest presumption. Prior to the 1984 policy guidelines for natural gas imports, the DOE's review procedures were incompatible with prevailing

conditions.[248] Therefore, the "DOE's predecessor halted its review of natural gas import applications to conduct a public conference process to reexamine natural gas import policy in response to evolving market conditions."[249] The result culminated in the 1984 guidelines.[250] While the DOE similarly halted review after the Sabine Pass approval to conduct the LNG Export Study, it did not conduct a public conference process, nor did it culminate into any reliable policy guidelines. The DOE should issue a notice-and-comment rule making to generate more exacting public interest policy and criteria. At minimum, the DOE should issue more specific guidance on what and how it will weigh relevant public interest criteria.

In order to establish a well-defined public interest criteria, the DOE will have to determine its broad policy goals for LNG exports—whether it wants to maintain the same goals listed in the 1984 guidelines, add to the goals, or change them altogether. Proponents of LNG exports argue that the DOE export policy should allow the market to naturally regulate LNG exports.[251] This goal is similar to the 1984 policy goal "to minimize federal control and involvement in energy markets."[252] Most opponents are concerned about the residual environmental and economic effects, so they want the DOE to take a more conservative policy approach towards LNG exports.[253] For instance, the DOE's policy goal could be to maintain national energy independence. Under such a policy,

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248. *See* Panhandle Producers & Royalty Owners Ass'n v. Econ. Regulatory Admin., 822 F.2d 1105, 1107 (1987) (stating that Delegation Order No. 0204-54 was ill-matched because "long-term contracts were binding domestic producers to take Canadian gas at prices that had since become uncompetitive").

249. *Id.*

250. *Id.*

251. *See*, *e.g.*, PROSPERITY AT HOME, *supra* note 60, at 7 (describing that DOE appears to be moving away from the 1984 policy guidelines, which has unsettlingly led to "extensive delays and additional uncertainty). *See also* Loris, *supra* note 56, at 3 (asserting that "[g]oods and services should be allocated to their highest-valued use, and that is determined by who is willing to pay the most for them").

252. *See* New Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6,684 (1984).

253. *See*, *e.g.*, SEGALL, *supra* note 62, at 42 (concluding that DOE should not issue any more export licenses until DOE acknowledges its environmental responsibilities and begins a national conversation). *See also The Department of Energy's Strategy for Exporting Liquefied Natural Gas: Hearing Before the Subcomm. on Energy Policy, Health Care and Entitlements of the H. Comm. on Oversight and Government Reform*, 113th Cong. 22–24 (2013) (statement of Paul N. Cicio, President, Indus. Energy Consumers of Am.) (arguing that DOE's public interest criteria are too narrow and vague, and offering extended review criteria that DOE should consider on a case-by-case basis in an incremental fashion).

LNG exports would be consistent with the public interest if domestic natural gas supply was sufficient to meet future projected demand, so that the U.S. will not have to turn to international markets to meet demand. The point is that the DOE cannot issue specific guidance without determining its policy direction for natural gas exports. Merely adopting natural gas import policy goals, created under different circumstances, does not adequately address the current natural gas landscape. It will benefit all parties once the DOE determines its general natural gas export policy and issues some form of rulemaking on public interest criteria.

The U.S., as a promoter of capitalism and free trade, should maintain the 1984 policy goal to "minimize federal control and involvement in energy markets." However, contrary to these goals, the U.S. and the world are now much more concerned with CO_2 and other greenhouse-gas emissions. The DOE might decide that pursuing cleaner sources of energy is a prevailing policy goal. However, this policy goal should not be directed at U.S. CO_2 emissions alone, but could be directed at global emissions. As such, exporting LNG could promote cleaner energy use worldwide.[254]

The DOE has indicated that it will review a wide range or nonexclusive criteria, including the following: domestic need for the natural gas proposed for export, adequacy of domestic natural gas supply, U.S. energy security, impact on the U.S. economy, impact on domestic natural gas prices, international considerations, environmental considerations, and any other interest relevant to the proceedings. A broad, open list of public interest criteria is not necessarily problematic, but the DOE should indicate how the agency will balance public interest factors. Essentially, the DOE should determine how severe LNG export impacts must be to overcome the public interest presumption. Will one "severe" impact be sufficient to overcome the presumption; are several "severe" impacts required; or will several moderate impacts be sufficient? To help the DOE balance public interest criteria it should request periodic studies concerning the impacts of LNG exports on the economy, natural gas supply and demand, and the environment.

The DOE should consider limiting economic and energy supply comments to the notice-and-comment period for the LNG Export Study to decrease the length of review for exports to nations that will require a public interest review. Under this process, LNG export studies, subject to

254. CUNNINGHAM, *supra* note 13, at 9 (exporting LNG "can help America's allies around the world bridge from dirtier sources of energy, like coal and oil, to cleaner, carbon-free sources of energy").

notice-and-comment review, will determine the rate and volume of LNG exports within the public interest. Opposing parties may submit their competing studies and economic and energy supply comments at one time: during the notice-and-comment period for the LNG Export Study. This process will remove the frequent and arbitrary review of competing studies, while allowing the DOE to consistently determine that the LNG Export Study is paramount. Therefore, the remaining public interest review would consider whether the proposed exports fit within the limits already predetermined to be within the public interest by the LNG Export Study, and not every economic and energy supply issue previously addressed in the LNG Export Study.

VI. CONCLUSION

Today, as the world's largest natural gas producer, the U.S. has an abundance of cheap natural gas to sell to foreign nations in the form of LNG. However, producers can easily export LNG to FTA countries. In contrast, the majority of LNG exports to non-FTA countries require an extended public interest approval by the DOE. It is now apparent, since the U.S. only recently became a natural gas exporter, that the FTA distinction is irrelevant and arbitrarily applied to LNG exports. These export restrictions are a relic of a very different time. Twenty years ago, during a desperate need for natural gas imports, the FTA distinction made sense. However, they no longer pertain to LNG exports today, as the LNG importing country is irrelevant to the public interest review. Furthermore, the DOE has made no attempt to differentiate its public interest review for LNG exports from its outdated public interest guidelines for imports, and it has not indicated how it determines relevant criteria. In fact, the DOE appears to give little to no weight to any public interest concerns against LNG exports. For example, the DOE refuses to consider the majority of the environmental impact concerns. The public interest review, as it stands now, is a futile exercise, as the DOE has yet to find any reason to deny an LNG export application. This current, unguided public interest review has managed only to add years to the DOE approval process.

Both Congress and the DOE should take prompt action to remedy the arbitrary public interest review and develop a relevant process. Specifically, Congress should give the DOE authority to add or remove countries (or groups of countries) from the public interest exemption in light of changing circumstance. In addition, Congress should require the DOE to issue guidance on what it considers pertinent public interest factors and how it intends to weigh those factors. Last, Congress should

require that the DOE conduct periodic studies on the economic, geopolitical, and environmental effects of LNG exports so that the agency may update its public interest exemptions and guidance. The DOE needs to update and its 1984 natural gas importing guidelines to meet present-day energy policy goals. In addition, the DOE should issue notice-and-comment rulemaking on relevant public interest factors and how it will weigh those factors. Finally, the DOE should continue to request updated LNG Export Studies and request an environmental study tailored to LNG exports. As it stands the public interest review for LNG exports to non-FTA countries is an arbitrary and irrelevant process. Therefore, Congress and the DOE must develop more exacting standards of review.