

A Deep Dive Into Liquefied Natural Gas ("LNG"): Is LNG a Clean Enough and Positive Energy Source for Globalized Trade or a Port Nuisance?

Sydney Weathersby

A DEEP DIVE INTO LIQUEFIED NATURAL GAS ("LNG"): IS LNG A CLEAN ENOUGH AND POSITIVE ENERGY SOURCE FOR GLOBALIZED TRADE OR A PORT NUISANCE?

I. INTRODUCTION

What if there was a way to create jobs, boost the global economy, reduce greenhouse gases, and decrease political instability through the improved use of natural resources? It is a Monday morning and Luke is off to work. As Luke rides the train, he briefly checks the newspaper headlines on his phone. The multiple headlines read: "The unemployment rate held at 5.3 percent, and the number of unemployed persons was little changed at 8.3 million"; "Tackling The Real Unemployment Rate: 12.6%"; "Fossil Fuels Must Stay in Ground to Stop Warming Scientists Say"; and "Expanded Exports of Liquefied Natural Gas would Lift the US Economy."¹ These headlines indicate that the United States and world economies have problems. In response to these headlines, news analysts, commentators, and environmentalists offer solutions ranging from creating more jobs through short and long term infrastructure projects, increasing wages, reducing climate change by implementing "greener standards," and changing the laws, which govern the use and trade of natural resources.

Imagine that there is one solution to solving these problems highlighted in the headlines. Changing the way that federal agencies regulate liquefied natural gas ("LNG") may solve many of the aforementioned problems.² Today, the United States and other developed countries rely on natural gas as an energy source for residential,

¹ See Thomas Biesheuvel, *Fossil Fuels Must Stay in Ground to Stop Warming, Scientists Say*, BLOOMBERG (Jan. 7, 2015), <http://www.bloomberg.com/news/2015-01-07/fossil-fuels-must-stay-in-ground-to-stop-warming-scientists-say.html> [<http://perma.cc/8E96-BMKU>] (speculating the effects of increased removal of fossil fuels and the impact it would have on the environment); Louis Efron, *Tackling The Real Unemployment Rate: 12.6%*, FORBES (Aug. 20, 2014), <http://www.forbes.com/sites/louisefron/2014/08/20/tackling-the-real-unemployment-rate-12-6/> [<http://perma.cc/35V5-F2VT>] (commenting on the employment rate); Raymond J. Keating, *Expanded Exports of Liquefied Natural Gas Would Lift the US Economy*, ROLL CALL (Nov. 19, 2014), http://www.rollcall.com/news/expanded_exports_of_liquefied_natural_gas_would_lift_the_us_economy-238097-1.html [<http://perma.cc/CE5X-9PFZ>] (predicting an increase in United States job growth from expanded LNG); United States Department of Labor, *Economic News Release: Employment Situation Summary*, BUREAU OF LABOR STATISTICS (Aug. 7, 2015), <http://www.bls.gov/news.release/empsit.nr0.htm> [<http://perma.cc/DC7Q-3PYC>] (providing statistics on the employment rate).

² This scenario is fictional and solely the work of the author.

commercial, industrial, transportation, and electrical generation uses.³ As America is one of the world's leading consumers of energy and also the greatest contributor of greenhouse gas emissions, American LNG can serve as an alternative source for power generation.⁴ Furthermore, LNG is cheaper, cleaner, and can provide an alternative power generation source because it utilizes natural gas that is cleaner than other fossil fuels.⁵

This Note explains why the Department of Energy's Office of Fossil Energy ("DOE" or "DOE/FE") and the Federal Energy Regulatory Commission ("FERC") must reform their application criteria for exports of LNG. The current laws and policies regarding LNG application criteria are inadequate and do not support expanded trade to non-free trade countries, which narrows the potential LNG market.⁶ As a result, this Note proposes changes to the federal law and ultimately offers a model statute amending the current procedure around the application criteria for exporting LNG.⁷ Specifically, this Note recommends the transfer of jurisdictional and formalized review to an independent agency, other than the FERC and the DOE, which would then issue decisions regarding export applications in a shorter time span.⁸ The impact of the Note's proposed amendment to the Natural Gas Act ("NGA") and regulatory framework of the DOE and FERC will allow American LNG to serve international demand, increase trade, and thereby reduce greenhouse emissions from harsh fossil fuels like coal and oil.⁹

Part II of this Note provides background on the creation of LNG, gives information regarding the five complex federal acts that are crucial to LNG regulation, and considers recent federal proposed legislation on this

³ See United States Environment Protection Agency, *Natural Gas: Electricity from Natural Gas*, EPA.GOV (Sept. 25, 2013), <http://www.epa.gov/cleanenergy/energy-and-you/affect/natural-gas.html> [<http://perma.cc/PH4Q-JPX6>] (describing the common uses of natural gas for power generation).

⁴ See Irma S. Russell, *The Power Structure: Energy, Politics, and the Public Interest in the LNG Debate*, 2 ENVTL. & ENERGY L. & POL'Y J. 49, 52 (2007) (explaining how LNG has the potential to be the primary source of energy).

⁵ See *infra* Part II (detailing the benefits of LNG). "Natural gas is the cleanest fossil fuel that, when combusted, emits only 54.0% and 72.5% the carbon of coal and oil, respectively, and none of the particular matter or sulfur oxide." Christopher Goncalves, *Breaking Rules and Changing the Game: Will Shale Gas Rock the World?*, 35 ENERGY L. J. 225, 231 (2014).

⁶ See *infra* Part III.A (analyzing how the current LNG export policies restrict trade and impede on potential new markets for natural gas).

⁷ See *infra* Part IV (providing a solution to the problems with the current LNG export policy).

⁸ See *infra* Part IV (detailing a four step procedure for expanding trade and narrowing the review procedure of LNG export applications).

⁹ See *infra* Part III (analyzing the problems with the current policies that regulate natural gas).

issue.¹⁰ Next, Part III analyzes the potential international demand for LNG focusing on the environmental, economic, social, and political effects, and how a reformed LNG statute will change the application criteria and positively enhance the United States and global trade.¹¹ Subsequently, Part IV proposes a solution to the agency requirements and provides a model statute, which would revise the NGA and the overall LNG export procedures.¹² Finally, Part V concludes by readdressing the importance of reforming the existing LNG export laws and policies.¹³

II. BACKGROUND

Natural gas is a fossil fuel used today as a common energy source.¹⁴ Relative to coal and oil, natural gas is considered to be a clean, safe, and a useful source of energy because it emits fewer byproducts into the air.¹⁵ In order for natural gas to be utilized as a power source, a drill must be inserted into the ground to remove the natural gas, then the gas is purified where it is transformed ultimately for power generation.¹⁶ Like natural

¹⁰ See *infra* Part II.B (explaining the five statutes that regulate standards for exporting LNG, the various requirements for applicants to receive federal approval to build terminals for exporting LNG and the requirements for transmitting and selling to domestic and international markets).

¹¹ See *infra* Part III (analyzing the current problems under the NGA and how a change in its provisions could result in foreign policy, economic, and environmental benefits relative to coal and oil).

¹² See *infra* Part IV (proposing a model regulation that will narrow the public interest standard, create a separate agency to monitor export terminals and issue quicker decisions on LNG exports).

¹³ See *infra* Part V (concluding the Note).

¹⁴ See *Natural Gas in History*, AM. PUB. GAS ASS'N, <http://www.apga.org/i4a/pages/index.cfm?pageid=3329> [<http://perma.cc/23KJ-9RF2>] ("Natural gas currently supplies more than one-half of the energy consumed by residential and commercial customers, and about 41 percent of the energy used by U.S. industry."); *Overview of Natural Gas*, NATURALGAS.ORG (Sept. 20, 2013), <http://naturalgas.org/overview/> [<http://perma.cc/9S8A-RPWT>] (providing an overview on natural gas and how it is a vital resource).

¹⁵ See *Background*, NATURALGAS.ORG (Sept. 20, 2013), <http://naturalgas.org/overview/background/> [<http://perma.cc/TSY8-GH6A>] (detailing how natural gas is a colorless, shapeless, and odorless combustible gas that emits a lot of energy when burned and how natural gas is a fossil fuel and less combustible relative to fossil fuels such as coal and oil). Natural gas is a fossil fuel created by the remnants of plants, animals, and microorganisms that lived millions and millions of years ago. *Id.* Natural gas is usually found under the surface of the earth in the sedimentary rock. *Id.*

¹⁶ See *How Is Natural Gas Produced*, GAZPROM, <http://www.gazprominfo.com/articles/production-of-natural-gas/> [<http://perma.cc/2W3P-XP3X>] (explaining the natural gas extraction process).

gas, LNG is produced in a similar method.¹⁷ A drill is inserted into the ground and instead of the gas that is extracted remaining in its original stage, the gas is liquefied.¹⁸

Changing the way federal agencies regulate LNG export applications requires the review of multiple statutes and agency processes.¹⁹ First, Part II.A explains how LNG is created, delivered, and how the United States became an exporter of LNG.²⁰ Second, Part II.B provides background on the following five statutes that regulate the exportation of LNG: the NGA; the National Environmental Policy Act (“NEPA”); the Deepwater Port Act (“DPA”); the Maritime Transportation Security Act (“MTSA”); and the Energy Policy Act (“EPAAct”).²¹ Third, Part II.C expounds on the roles of the DOE and the FERC.²² Finally, Part II.D introduces the DOE’s 2014 proposed policy change to suspending conditional authorizations for non-free trade agreement (“non-FTA”) applications on LNG exports and the recent 2015 bill from the House of Representatives to amend existing LNG export procedures.²³

A. History of American LNG

America’s widespread use of LNG began in 1959.²⁴ In fact, the exportation of American LNG played a pivotal role in the LNG global market.²⁵ In 1959, the United States first entered into the LNG market as

¹⁷ See United States Environment Protection Agency, *supra* note 3 (describing the method how natural gas is extracted from the ground). The natural gas production begins with the extraction of natural gas through drilled wells. *Id.* The extracted gas is treated to remove the impurities. *Id.* Then pipelines transport the natural gas to either power plants or boilers and turbines to generate electricity. *Id.*

¹⁸ See *id.* (explaining the extraction process).

¹⁹ See *infra* Part II.B (expounding on the five legislative statutes that regulate LNG).

²⁰ See *infra* Part II.A (providing the history on how the United States became an exporter of LNG).

²¹ See *infra* Part II.B (detailing the regulations that govern LNG, which are: the NGA; the NEPA; the DPA; the MTSA; and the EPAAct).

²² See *infra* Part II.C (defining the jurisdictional scope of the DOE and the FERC and how the DOE and the FERC regulate and enforce provisions governing LNG).

²³ See *infra* Part II.D (providing information on how the DOE eliminated the Order of Precedence, conditional authorizations for non-FTA exports, and the history of congressional action on LNG exports).

²⁴ See Center for Energy Economics, *Brief History of LNG*, UNIV. OF TEXAS, http://www.beg.utexas.edu/energyecon/lng/LNG_introduction_06.php [<http://perma.cc/4N9W-JZAS>] (explaining the history of LNG and the growth in overall demand of LNG).

²⁵ See Charles Ebinger et al., *Evaluating the Prospects for Increased Exports of Liquefied Natural Gas from the United States: An Interim Report*, ENERGY SECURITY INITIATIVE 21 (Jan. 2012), http://www.brookings.edu/~media/research/files/papers/2012/1/natural%20gas%20ebinger/natural_gas_ebinger_2.pdf [<http://perma.cc/XQ9P-XTPD>] (detailing the prospective use of LNG exports from the United States).

an exporter to Lake Charles, England.²⁶ In 1969, the United States' first commercial exports of LNG were sold to the Asian-Pacific market of Japan.²⁷ Since 1960, the United States created a sizable pipeline infrastructure that allowed American LNG to expand to new energy markets.²⁸ Thus, with the existing infrastructure, American LNG should be expected to play a sizable role in the natural gas industry.²⁹

The creation of LNG is a basic procedure.³⁰ LNG is a form of natural gas created through the liquefaction process, which requires cooling natural gas to -260 degrees Fahrenheit.³¹ During the liquefaction process,

²⁶ See Kathryn E. Kransdorf, Note, *Not on my Coastline: The Jurisdictional Battle Over the Siting of LNG Import Terminals*, 17 *FORDHAM ENV'T L. REV.* 37, 41 (2005) (providing the history of LNG). "In January 1959, the world's first LNG tanker, the Methane Pioneer (a converted World War II Liberty freighter) carried liquefied natural gas from Lake Charles, La. to Canvey Island, United Kingdom." *About LNG*, LNG AMERICA, <http://www.lngamerica.com/lng-facts.html> [<http://perma.cc/F4MA-2JGF>]. Subsequently, the United States built LNG terminals on both the Atlantic and Pacific regions after seeing that LNG could be transported across the ocean. *Id.*

²⁷ See *Kenai LNG Exports*, CONOCO PHILLIPS, <http://alaska.conocophillips.com/what-we-do/natural-gas/lng/Pages/kenai-lng-exports.aspx> [<http://perma.cc/8XDK-UFQL>] (providing a history on the Kenai Alaska LNG plant).

²⁸ See Claudia A. Duncan, *Let's Not Reinvent the Wheel: Harnessing the Current Domestic Regulatory Framework for the International Export of Liquefied Natural Gas*, 46 *CORNELL INT'L L.J.* 611, 617 (2013) (explaining the pipeline infrastructure of current terminals). "The American natural gas system boasts 210 natural gas pipeline systems, 305,000 miles of interstate and intrastate transmission pipelines, over 1,400 compressor stations, and 400 underground natural gas storage facilities." *Id.*

²⁹ See Keating, *supra* note 1 (estimating the demand for natural gas outside of the United States markets through LNG exports). It is predicted that the United States' domestic natural gas production is to increase. *Id.* "[T]he U.S. Energy Information Agency's 2014 Annual Energy Outlook projects a 56 percent increase in total natural gas production from 2012 through 2040." *Id.* Currently, the United States has twelve import and export facilities, which if expanded, should allow for the shipping of LNG to new international markets. Duncan, *supra* note 28, at 617-18; see also Mike Hightower et al., *Guidance on Risk Analysis and Safety Implications of Large Liquefied Natural Gas (LNG) Spill Over Water*, SANDIA NAT'L LAB. 26 (Dec. 2004), http://www.energy.ca.gov/lng/documents/2004-12_SANDIA-DOE_RISK_ANALYSIS.PDF [<http://perma.cc/378L-999U>] (estimating that "worldwide LNG trade will continue to increase to 35% by 2020").

³⁰ See *Liquefied Natural Gas*, CUMMINS WESTPORT, <http://www.cumminswestport.com/liquefied-natural-gas> [<http://perma.cc/6CV9-Z3L2>] (providing the procedure for LNG liquefaction). "LNG accounts for an increasing amount of natural gas consumption worldwide, and it is produced in dozens of large-scale liquefaction plants." *Id.*

³¹ See Patrick E. George, *What Is Liquefied Natural Gas Used For?*, HOW STUFF WORKS, <http://science.howstuffworks.com/environmental/energy/liquefied-natural-gas.htm> [<http://perma.cc/KMF9-7MAA>] (detailing how natural gas is created by pumping from the Earth's crust). Once natural gas becomes a liquid it is easier to store and can be transported. *Id.* Moreover, LNG is beneficial as its efficient transportation allows for easier storage and transportation. *Liquefied Natural Gas Facilities*, INGAA, <http://www.ingaa.org/cms/4693.aspx> [<http://perma.cc/H7C4-NDBJ>]. When natural gas is cooled below its boiling point, the remaining natural gas is primarily methane with only small amounts of other

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natural gas is changed to 1/600th of its original volume.³² Once the gas is liquefied, the LNG can then be shipped.³³

Today, LNG is used as a power source, for both commercial and residential heating requirements and power generation.³⁴ The New England and Middle Atlantic states use LNG as a supplemental energy source during cold periods.³⁵ LNG supplements other power sources during peak periods when pipeline production cannot meet consumer

hydrocarbons. California Energy Commission, *Frequently Asked Questions About LNG*, CA.GOV, <http://www.energy.ca.gov/lng/faq.html#100> [<http://perma.cc/5G9N-ZBBK>]. Thus, LNG's formation and storage is efficient because the liquefied gas contains 600 times less space than its gaseous form, which allows for much larger quantities of LNG to be stored. *Liquefied Natural Gas Facilities*, *supra* note 31.

³² See Energy Sources, *Liquefied Natural Gas*, CHEVRON (May 2014), <http://www.chevron.com/deliveringenergy/naturalgas/liquefiednaturalgas/> [<http://perma.cc/C56K-PABU>] (explaining the benefits of LNG). LNG is created through a complex four-step process called the LNG "value chain." Center for Energy Economics, *The LNG Value Chain*, UNIV. OF TEXAS, http://www.beg.utexas.edu/energyecon/lng/LNG_introduction_08.php [<http://perma.cc/XMT5-3N3P>]. The value chain includes the following four steps: (1) exploration and production; (2) liquefaction; (3) shipping; and (4) storage and regasification. *Id.* During the exploration and production link, ideas are proposed on how to develop a natural gas resource. *Id.* Typically, corporations encourage the development of LNG facilities near natural gas production fields and pipelines because the facilities must connect to the liquefaction plant. Josh Lute, *LNG Terminals: Future or Folly?*, 43 WILLAMETTE L. REV. 621, 631 (2007). In the second link, liquefaction, the liquefaction plant purifies the natural gas removing minerals and contaminants and stores it in a double-walled tank at atmospheric pressure. *Id.* Once a liquid, LNG is compressed in a volume six hundred times for transportation. Russell, *supra* note 4, at 51. To illustrate the compression of LNG, it is comparable to "shrinking the volume of a 17 beach ball down to a Ping-Pong ball." *Liquefied Natural Gas (LNG)*, AM. GAS ASS'N, <http://www.aga.org/1-liquefied-natural-gas-lng> [<https://perma.cc/VA43-94ZF>]. During the third link, shipping, the LNG is shipped in double-walled cryogenic containers. Russell, *supra* note 4, at 51. These double-walled cryogenic containers can transport "125,000 to 135,000 cubic meters of LNG, or approximately 2.6 to 2.8 billion cubic feet of natural gas." Lute, *supra* note 32, at 631. Stated another way, these double-walled cryogenic containers are useful as it can hold about five percent of average gas consumed in the United States. Shelia Slocum Hollis, *Liquefied Natural Gas: "The Big Picture" for Future Development in North America*, 2 ENV'T L. & ENERGY L. & POL'Y J. 5, 7 (2007). Last, in the final link, storage and regasification, the LNG ships are transported to the various ports to off-load it into insulated storage tanks. Lute, *supra* note 32, at 631. Once the LNG is at a port, regasification occurs and the natural gas is converted back to a gaseous form and transported either by pipeline or containers to end-users. Russell, *supra* note 4, at 51.

³³ See Energy Sources, *supra* note 32 (explaining the benefits of LNG).

³⁴ See George, *supra* note 31 (listing the uses of natural gas). "According to the U.S. Energy Information Administration, 65 million people use natural gas to heat their homes." *Id.* Additionally, "[n]atural gas provides 76 percent of the energy for the residential and commercial sectors, and provides 40 percent of the industrial sector's energy needs." *Id.*

³⁵ See Office of Oil and Gas, *U.S. LNG Markets and Uses*, U.S. ENERGY INFO. ADMIN. (Jan. 2003), http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2003/lng/lng2003.pdf [<http://perma.cc/EQQ3-KWE7>] (explaining how LNG is used to decrease costs when underground storage is not available).

demand.³⁶ Additionally, LNG acts as a supplemental power source when pipeline capacities from supply areas are used seasonally or where liquefaction storage can reduce expensive pipeline costs during the peak periods.³⁷ Lately, LNG regained popularity as a power source primarily where coal and oil previously was used.³⁸

B. Statutory Regulation of LNG

In 1938, Congress regulated natural gas, and continued to enact and amend various statutes regulating LNG.³⁹ Five important statutes govern LNG.⁴⁰ These statutes explain the standards for exporting LNG, the requirements for applicants to receive federal approval to build terminals for exporting LNG, and the requirements for the transmitting and selling LNG to domestic and international markets.⁴¹ Part II.B.1 explains the pivotal natural gas regulation, the NGA and the “public interest” standard.⁴² Next, Part II.B.2 describes the NEPA and how all LNG export applications must comply with the environmental safety standards enforced by the FERC; the DPA; and the MTSA, which amended provisions to the DPA.⁴³ Finally, Part II.B.3 expounds on the EPAct and how its provisions broadened the applicability of LNG statutes, expanded

³⁶ See Kransdorf, *supra* note 26, at 41 (explaining what is LNG and the history of the LNG industry).

³⁷ See Office of Oil and Gas, *supra* note 35 (detailing the impact that LNG is to play in the domestic and international market and how LNG provides numerous benefits).

³⁸ See *EIA: LNG Shows Potential as Railroad Fuel*, THE DAILY FUSION (April 15, 2014), <http://dailyfusion.net/2014/04/lng-railroad-fuel-27894/> [<http://perma.cc/8FEL-VWAD>] (explaining that the “EIA projects that liquefied natural gas (LNG) will play an increasing role in powering freight locomotives in coming years”). Also, studies indicate that Hawaii’s consumption of LNG is expected to rise as it reduces its petroleum base and relies more upon LNG. U.S. Energy Information Administration State Energy Data System and International Energy Statistics, *Hawaii and U.S. Territories Aim to Increase Fuel Diversity with LNG Imports*, U.S. ENERGY INFO. ADMIN. (Aug. 19, 2014), <http://www.eia.gov/todayinenergy/detail.cfm?id=17611> [<http://perma.cc/7XKK-KG9S>].

³⁹ See *Natural Gas in History*, *supra* note 14 (providing a history of natural gas regulation). The federal government regulated natural gas because of the rise in natural gas and the growing monopolistic tendencies of interstate pipelines to charge higher than competitive prices. *Id.*

⁴⁰ See *infra* Part II.B (explaining the five statutes that regulate LNG exportation).

⁴¹ See *infra* Part II.B.1 (detailing the NGA and its procedures for exportation, transportation, and the sale of natural gas to interstate and foreign markets).

⁴² See *infra* Part II.B.1 (explaining the NGA).

⁴³ See *infra* Part II.B.2 (describing how the NEPA requires federal review of natural gas applications to comply with environmental standards before final action and how LNG terminals located offshore beyond state waters are regulated by the MTSA).

the roles and duties of federal agencies, and authorized states to provide input on the LNG terminal siting process.⁴⁴

1. NGA and the “Public Interest” Standard

The NGA was enacted to create a regulatory scheme for interstate transport and sale of natural gas.⁴⁵ Specifically, the NGA’s purpose was to “limit the [natural gas] market’s power over interstate pipeline companies.”⁴⁶ Since 1938, Congress amended the NGA to expand to varying energy changes.⁴⁷ Today, Section 3 of the NGA governs the procedures for siting, constructing, expanding, and operating LNG terminals.⁴⁸

Within the NGA, 15 U.S.C. § 717 regulates all natural gas distribution, including LNG terminals.⁴⁹ This regulation incorporates federal and local government components.⁵⁰ Under Section 1, 15 U.S.C. § 717(a), the NGA provides the “public interest” standard, which controls the transporting

⁴⁴ See *infra* Part II.B.3 (reaffirming the Commission’s role on regulating onshore LNG terminals and how the EPAct of 2005 re-regulated LNG).

⁴⁵ See *The History of Regulation*, NATURALGAS.ORG, <http://naturalgas.org/regulation/history/> [<http://perma.cc/A9FG-CP3Y>] (providing an overview of the NGA). The NGA “constitute[d] the first real involvement of the federal government in the rates charged by interstate gas transmission companies.” *Id.* The NGA protects consumers from unreasonable high prices set by the monopolistic tendencies of interstate pipelines. *Natural Gas in History*, *supra* note 14. The NGA directed the Federal Power Commission to regulate the transportation, sale of natural gas, regulation of interstate natural gas delivery, and to ensure that new interstate pipeline construction was consistent with the public convenience and necessity. *Id.*

⁴⁶ See Rebecca Kennedy, *Crossing the Line: Selective Licensing of Liquefied Natural Gas Exportation Facilities Is Unconstitutional*, 14 U. PITT. J. TECH. L. & POL’Y 128, 130 (2013) (explaining the history of LNG and how the NGA was created to provide a regulatory framework for LNG exports).

⁴⁷ See *id.* (explaining the regulation of natural gas and how the NGA extended to include LNG).

⁴⁸ See Matt Salo et al., *U.S. LNG Export Projects: Regulatory Outlook and Contracting Mechanisms*, 8 TEX. J. OIL GAS & ENERGY L. 61, 67 (2012) (explaining how the United States transformed from an LNG importer to an LNG exporter due to the shale gas increase and import terminals explored exportation as a new revenue source).

⁴⁹ See Salo et al., *supra* note 48, at 67 (addressing how the NGA section 3 (15 U.S.C. § 717b) governs the “siting construction, expansion, or operation of an LNG terminal”). Under 15 U.S.C. § 717a(11) of the NGA, an LNG terminal includes:

[A]ll natural gas facilities located onshore or in State waters that are used to receive, unload, load, store, transport, gasify, liquefy, or process natural gas that is imported to the United States from a foreign country, exported to a foreign country from the United States, or transported in interstate commerce by waterborne vessel.

15 U.S.C. § 717a(11) (2012).

⁵⁰ See *Natural Gas in History*, *supra* note 14 (providing a history of natural gas regulation).

and selling of natural gas to the public.⁵¹ Specifically, Section 1 of the NGA states that the public interest standard applies to both the transportation of natural gas and its sale in interstate and foreign commerce.⁵² Under this Section of the NGA, when companies transport and sell natural gas for distribution where the public is affected, it is automatically deemed to have a public interest.⁵³ Thus, for American LNG companies to engage in selling or transporting LNG, they must comply with this standard.⁵⁴

Moreover, within the NGA's public interest standard, the Act explains the Federal Power Commission's jurisdictional power in § 717b(a).⁵⁵

⁵¹ See 15 U.S.C. § 717(a) (2012) (providing a regulatory context for the public interest standard under the NGA). The NGA specifies that in order for applicants to be classified within the "public interest standard," the gas must be for the business of transporting and selling natural gas for ultimate distribution in interstate and foreign commerce where the public is affected. *Id.* If the public is affected, then the federal regulation is required make a public interest determination. *Id.* This determination of the public interest is based on an evaluation of the following factors:

In evaluating whether a proposed export is within the public interest, the DOE/FE applies certain Policy Guidelines issued in 1984 that focus on the analysis on: [(1)] The domestic need for the natural gas proposed to be exported; [(2)] Whether there is a threat to the domestic security of supply; and [(3)] Other factors to the extent they are shown to be relevant to a public interest determination.

Susan L. Sakmar, *America's Natural Gas: From Shale Gas to LNG Exports*, HARV. BUS. L. REV., <http://www.hblr.org/2012/11/americas-natural-gas-from-shale-gas-to-lng-exports/> [<http://perma.cc/U6SY-XHRC>]. "This provision creates a rebuttable presumption that a proposed export of natural gas is in the public interest." Freeport LNG Expansion, L.P., DOE/FE Order No. 3282 at 6 (May 17, 2013), <http://energy.gov/sites/prod/files/2013/05/f0/ord3282.pdf> [<http://perma.cc/8M6B-FBRH>] [hereinafter Freeport]. The "DOE/FE must grant such application unless opponents of the application overcome that presumption by making an affirmative showing of inconsistency with the public interest." *Id.*

⁵² See 15 U.S.C. § 717(a) (explaining the regulation of natural gas and how natural gas transports and how sales for ultimate distribution to the public must comply with the public interest determination).

⁵³ See *id.* (providing the regulatory context that "[f]ederal regulation in matters relating to the transportation of natural gas and the sale thereof in interstate and foreign commerce is necessary in the public interest"). Under 15 U.S.C. § 717(b) of the NGA, it indicates that when transporting natural gas in interstate commerce, or reselling natural gas for ultimate public consumption for domestic, commercial, industrial, or natural gas companies engaged in the importation or exportation of natural gas in foreign commerce shall comply with the NGA authority. *Id.* § 717(b).

⁵⁴ See *id.* § 717 (stating the regulation process for natural gas companies).

⁵⁵ See 15 U.S.C. § 717b(a) (2012) (defining the regulatory procedure for natural gas companies). It states:

[N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the Commission authorizing it to do so. The Commission shall issue such order upon application, unless, after opportunity for hearing, it finds that the proposed exportation or importation will not be consistent with the public

Initially, all applications for exports of natural gas were regulated under the NGA's public interest standard.⁵⁶ However, in 1992, the EPAct amended provisions of the NGA where the automatic approval was extended primarily to countries with free trade agreements.⁵⁷ Since then,

interest. The Commission may by its order grant such application, in whole or in part, with such modification and upon such terms and conditions as the Commission may find necessary or appropriate, and may from time to time, after opportunity for hearing, and for good cause shown, make such supplemental order in the premises as it may find necessary or appropriate.

Id. Initially in 1938, the NGA vested the Federal Power Commission with regulatory powers over natural gas. Salo et al., *supra* note 48, at 67. However, in the 1970s, the Federal Power Commission split the Federal Power Commission's authority between the DOE and, within the DOE, to the FERC, with FERC being an independent agency. Gearold L. Knowles, *Liquefied Natural Gas: Regulation in a Competitive Natural Gas Market*, 24 ENERGY L. J. 293, 305 (2003). The current DOE was created following the enactment of section 301(b) of the Department of Energy Organization Act. *Id.* Currently, under Section 3 of the NGA, the DOE/FE has jurisdiction authorizing LNG gas exportation applications. See Salo et al., *supra* note 48, at 67.

⁵⁶ See 15 U.S.C. § 717(a) (stating the public interest standard).

⁵⁷ See Shani Harmon, *Reining in the Natural Gas Bonanza, Legally: Whether U.S. Law and Policy Restrictions on Natural Gas Exports are Consistent with International Trade Law*, 25 GEO. INT'L ENVTL. REV. 615, 619 (2013) (detailing the policy reasoning for the amendments to the NGA); Melissa Ann Miller, *Will the Circle Be Unbroken: Chile's Accession to the NAFTA and the Fast-Track Debate*, 31 VAL. U. L. REV. 153, 159 (1996) (providing a chronology on international trade agreements and U.S. trade relations). Congress thought that this method in granting automatic approval to countries with free trade countries was within the public interest because it allowed for broader participation in the natural gas market, which then would result in lower prices for consumers. Miller, *supra* note 57, at 159. Free trade agreements primarily have been utilized as beneficial agreements to the United States because these agreements reduce export barriers, protect the United States' interests competing abroad, and enable more stable and transparent trading and investment by permitting U.S. companies to export their products and services to trading partner markets. *U.S. Free Trade Agreements*, EXPORT.GOV, <http://export.gov/fta/index.asp> [<http://perma.cc/CB3L-8NYE>]. The countries that the United States currently has a free trade agreement include the following: "Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea and Singapore." Office of Fossil Energy, *How to Obtain Authorization to Import and/or Export Natural Gas and LNG*, ENERGY.GOV, <http://energy.gov/fe/services/natural-gas-regulation/how-obtain-authorization-import-and-or-export-natural-gas-and-lng#LNG> [<http://perma.cc/J9F2-PZLD>]. "Panama is the most recent country with which the United States has entered into a FTA that requires national treatment for trade in natural gas, effective October 31, 2012." *Id.* Israel and Costa Rica are exceptions to the free trade agreement. For example:

The DOE has determined that the United States' FTAs with Israel and Costa Rica do not require national treatment for trade in natural gas. The United States' FTA with Costa Rica explicitly provides that the parties must afford national treatment to each other's goods, but carves out "controls on the export of hydrocarbons" from this national treatment provision. The FTA with Israel is unique among the United

Section 3, 15 U.S.C § 717b applies directly to export authorizations with free trade countries and expedites the approval process for those applicants.⁵⁸ Specifically, within Section 717b(c), it clarifies Section 717b(a) that if a country is exporting to a country where a free trade agreement exists, the sale of LNG is within the public interest and granted without modification or delay.⁵⁹ Accordingly, subsections 717b(a), 717b(b), and 717b(c) read together provide the statutory guidelines for LNG applications, exports to free trade countries, and the standard for review for applicants with free trade agreements.⁶⁰

Furthermore, Section 717b explains the jurisdictional review process of the Federal Power Commission, later DOE, on applications and related criteria.⁶¹ Section 717b-1 states the application procedures.⁶² Section 717b-1(a) requires an applicant to follow the pre-filing procedures under the NEPA.⁶³ Moreover, Section 717b-1(b) extends decision making on the approval of LNG applications, allowing state governors to comment on

States' FTAs in that it does not explicitly provide that the parties must afford national treatment to each other's goods.

Salo et al., *supra* note 48, at 74.

⁵⁸ See 15 U.S.C. § 717b(b) (detailing the first sale process for applicants of LNG where there is an existing free trade agreement). Free trade agreements are crafted by the U.S. Congress. Salo et al., *supra* note 48, at 72-74. Free trade agreements are "significant international commitments by each contracting state to treat nationals of the other state[s] who do business in its territories on an even footing with its own nationals[.]" *Id.* at 73. "Proponents of FTAs maintain that they are 'one of the best ways to open markets to U.S. exporters.'" *Id.* As mentioned above, when the United States exports to a nation where there exists a free trade agreement, the application process is less rigorous. 15 U.S.C. § 717b(b). For example, when the natural gas is imported from a free trade country, the importation of such natural gas shall be treated as a "first sale" under section 3301(21). *Id.* § 717(b)(1). Moreover, an applicant will not receive unjust unreasonable, unduly discriminatory, or preferential basis because of its national origin. *Id.* § 717(b)(2).

⁵⁹ See 15 U.S.C. § 717b(c) (explaining the expedited application process for countries with free trade agreements). In 1992, Section 3(c) of the NGA was amended by section 201 of the EPAct (Pub. L. 102-486). Office of Fossil Energy, *supra* note 57. Under Section 3(c) of the NGA, the revised procedure required applicants to authorize imports and exports of natural gas, including LNG, to and from nations where there was in effect a free trade agreement requiring national treatment for trade in natural gas. *Id.* Moreover, Section 3(c) of the NGA required that the importation of LNG from other international sources must be consistent with the public interest and granted without modification or delay. *Id.*

⁶⁰ See 15 U.S.C. § 717b(a)-(c) (detailing the review procedure for LNG export applicants and the requirements mandated by free trade agreements).

⁶¹ See *id.* (providing the regulation that authorizes LNG sale, transportation, importation, and exportation of natural gas).

⁶² See *id.* § 717b-1 (stating the requirements for state and local safety considerations). "An applicant shall comply with the pre-filing process required under the National Environmental Policy Act of 1969 prior to filing an application with the commission." *Id.* § 717b-1(a).

⁶³ See *infra* Part III B.2 (describing the NEPA).

state and local safety concerns on proposed terminal development.⁶⁴ Finally, Section 717b-1(d) and Section 717b-1(e) further the requirements set by Section 717b-1(b) by ensuring that the local governmental concerns mentioned in Section 717b-1(b) are considered by assuring that emergency response and cost sharing plans are factored into the Commission's final decision on whether to grant or deny an application.⁶⁵

2. NEPA, DPA, and MTSA

In addition to the procedures stated by the NGA, additional steps in the LNG export application criteria include the pre-filing requirements under the NEPA.⁶⁶ Before an applicant can submit a formal application under the NGA's public interest standard, the applicant must first complete the mandatory review process established by the NEPA.⁶⁷ Before filing a formal application with the Commission, an applicant for LNG exportation must comply with standards set under the NEPA pre-

⁶⁴ See 15 U.S.C. § 717b-1(b) (explaining the protocol for reporting to the Commission any safety considerations). The states have thirty days to report to the Commission any safety consideration regarding an LNG application. *Id.* § 717b-1(c). The factors that states look to in determining adequate safety include the following: "(1) the kind and use of the facility; (2) the existing and projected population and demographic characteristic of the location; (3) the existing and proposed land use near the location; (4) the natural and physical aspects of the location; (5) the emergency response capabilities near the facility location; and (6) the need to encourage remote siting." *Id.* § 717b-1(b). After the receipt of a formal application and the governors' comments of local and safety consideration, the Commission sets a hearing to allow all interested parties to speak on the application. 15 U.S.C. § 717b(e). Afterwards, the Commission can either approve or disapprove an application for construction, expansion, operation, and siting of a LNG terminal. *Id.*

⁶⁵ See 15 U.S.C. § 717b-1(e) (describing how LNG terminals must establish an emergency procedure that is prepared in consultation with the United States Coast Guard and state and local agencies before the approval of an application by the Commission for construction).

⁶⁶ See *The National Environmental Policy Act of 1969*, ENERGY.GOV, http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/Req-NEPA.pdf [<http://perma.cc/5DR3-2U5L>] (detailing how the NEPA requires a federal mandatory environmental procedural review of natural gas applications and processes, which consists of an evaluation of the environmental effects of a federal undertaking including its alternatives).

⁶⁷ See Notice, 79 Fed. Reg. 77802 (Dec. 24, 2014) (detailing how the NEPA analyzes the federal activities that affect the environment and mandates that federal agencies evaluate the environmental impacts of agencies proposed actions before deciding to adopt proposals to act); see also *The National Environmental Policy Act of 1969*, *supra* note 66 (explaining that the NEPA was established to create a harmony between man and his environment while preventing or eliminating damage to the environment, biosphere, ecological systems, and natural resources). Currently, federal agencies must assess the projected effects of major federal actions that significantly affect the environment. United States Government Accountability Office, Report to the Ranking Member Committee on Energy and Natural Resources, *Natural Gas: Federal Approval Process for Liquefied Natural Gas Exports*, U.S. SENATE 8 (Sept. 2014), <http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=98667799&site=ehost-live> [<http://perma.cc/GV6G-UEX8>].

filing process.⁶⁸ Under the NEPA, there are three levels of review for an export applicant to be approved: a categorical exclusion, an economic assessment and a finding of no significant impact, and an environmental impact statement.⁶⁹ Typically, the pre-filing process should begin six months before the filing of a formal application for a LNG terminal.⁷⁰

While LNG export applicants must comply with the NGA's public interest standard and the pre-filing process under the NEPA and FERC's prerule, two additional statutes also impact LNG exports and application criteria, including the DPA and the MTSA.⁷¹ These statutes primarily apply to offshore terminals, outside of United States' territory.⁷² In 1974, the DPA was created to regulate the construction, operation, and environmental standards of deepwater ports off of the territorial boundaries of the United States.⁷³ Offshore deepwater ports are beneficial

⁶⁸ See 15 U.S.C. § 717b-1(a) (detailing the pre-filing process required under the NEPA before filing an application with the Commission). Under the NEPA, an export applicant should work with state and local officials on voicing their environmental concerns and must begin the pre-filing process at least six months before filing an application for authorization. *Id.*

⁶⁹ See National Environmental Policy Act, *Basic Information*, EPA (May 4, 2015), <http://www.epa.gov/compliance/basics/nepa.html> [<https://perma.cc/R9X8-M2SC>] (describing the review process under the NEPA). During the first level of analysis, "an undertaking may be categorically excluded from a detailed environmental analysis if it meets certain criteria which a federal agency has previously determined as having no significant environmental impact." *Id.* At the second level, the FERC evaluates the environmental assessment of an application and determines whether or not a federal undertaking would significantly affect the environment. *Id.* If the environmental assessment is miniscule or none is found, then there is a finding of no significant impact. *Id.* The last step, the environmental impact statement, evaluates the environmental consequences and the effect that it will have on the environment or health and welfare of man. *Id.* After the finalized environmental impact statement is reviewed, the statement is made a public record of its decision addressing how the findings of the environmental impact statement, including consideration of alternatives, were incorporated into the agency's decision-making process. *Id.*

⁷⁰ See 15 U.S.C. § 717b-1(a) (providing the procedure for LNG applications complying with the NEPA).

⁷¹ See U.S. Department of Transportation Maritime Administration, *Deepwater Port Licensing: Frequently Asked Questions*, http://www.marad.dot.gov/ports_landing_page/deepwater_port_licensing/dwp_faq/dwp_faq.htm [<http://perma.cc/2X8F-HQRE>] (providing information on deepwater ports and the license granting process). "Congress, in the Maritime Security Act of 2002 authorized the Deepwater Port Act to streamline regulations for natural gas and deepwater ports." *Id.* In 2002, the DPA was amended to include facilities, typically used for LNG ports constructed at sea, which are used as terminals to transfer natural gas for delivery to deepwater ports, onshore storage facilities, and pipelines. *Id.*

⁷² See *id.* (detailing the applicability of the DPA); see also Hollis, *supra* note 32, at 9 n.31 (explaining how under the DPA, a "facility" is defined as "any structure or facility of any kind located in, on, or adjacent to any waters subject to the jurisdiction of the United States").

⁷³ See 33 U.S.C. § 1502 (2012) (providing the definitions for terminology related to deepwater ports). It defines a "deepwater port" as: "any fixed or floating manmade

because their use can serve as an alternative to landlocked pipeline and pumping stations.⁷⁴ In addition, deepwater ports can increase safe and efficient transportation due to the decreased risk of tanker transportation traffic.⁷⁵ The DPA also includes protection provisions for marine and coastal environments from port development.⁷⁶ Furthermore, the DPA permits state intertwinement as states regulate activity and monitor overall compliance of deepwater ports with environmental review.⁷⁷

In 2002, as a response to provisional amendments to the DPA, the MTSA was created to include offshore natural gas facilities.⁷⁸ Under the MTSA, the Maritime Administration (“MARAD”), within the Department of Transportation, regulated LNG terminals located offshore beyond state waters.⁷⁹ Today, the MARAD is the lead agency that reviews application

structures other than a vessel, or any group of such structures, that are located beyond State seaward boundaries and that are used or intended for use as a port or terminal for the transportation, storage, or further handling of oil or natural gas for transportation to any State[.]” *Id.* § 1502(9).

⁷⁴ See Soumyajit Dasgupta, *What Are Deepwater Ports?*, MARINE INSIGHT (July 15, 2011), <http://www.marineinsight.com/marine/what-are-deep-water-ports/> [http://perma.cc/JLW3-BNL8] (explaining a deep water port). Typically, deepwater ports are used for loading or unloading and further handling of oil for transportation to any state. See Daron T. Treet, *Deepwater Port Act Amended to Allow Oil and Gas Exports from Offshore Facilities*, HOLLAND & KNIGHT (Dec. 21, 2012), <http://www.hklaw.com/publications/Deepwater-Port-Act-Amended-to-Allow-Oil-and-Gas-Exports-from-Offshore-Facilities-12-21-2012/#sthash.tqFnfb4s.dpuf> [http://perma.cc/U7NS-T26] (explaining how the DPA allows for the authorization ownership, construction and operation of marine terminals in federal waters on the Outer Continental Shelf (“OCS”).

⁷⁵ See Dasgupta, *supra* note 74 (providing information on deepwater ports). “Deep water ports are also defined to be any port which has the capability to accommodate a fully laden Panamax ship, which is determined principally by the dimensions of the Panama Canal’s lock chambers.” *Id.*

⁷⁶ See 33 U.S.C. § 1502(12) (defining “marine environment” which “includes the coastal environment, waters of the contiguous zone, and waters of the high seas; the fish, wildlife, and other living resources of such waters; and the recreational and scenic values of such waters and resources”). During the application review procedure, the “Maritime Administration, acting on behalf of the Secretary, is required to confer with a number of Federal agencies and the public, and must also obtain approval from the Governor of the adjacent state(s).” U.S. Department of Transportation Maritime Administration, *supra* note 71.

⁷⁷ See 33 U.S.C. § 1505(a) (2012) (providing the regulatory authorization procedure for the various environmental agencies that monitor the deepwater ports).

⁷⁸ See Sean T. Dixon, *Deepwater Liquefied Natural Gas Ports and the Shifting U.S. Liquefied Natural Gas Market*, 17 OCEAN & COASTAL L.J. 1, 2 (explaining how the DPA was rarely used until 2002 when it was amended to allow for joint jurisdictional review). Originally, the DPA applied to only oil import terminals but in 2002, it was amended to include LNG import terminals. U.S. Department of Transportation Maritime Administration, *supra* note 71.

⁷⁹ See Notice, 79 Fed. Reg. 48133 (Aug. 15, 2014) (explaining the regulation of LNG “pursuant to Section 3(9) of the Deepwater Ports Act, as amended by Section 312 of the Coast Guard and Maritime Transportation Act of 2012”).

proposals of offshore terminals.⁸⁰ Similar to the amendments of the DPA with the MTSA, in 2005, Congress amended federal provisions applying to LNG with the EAct.⁸¹

3. EAct

Following the amendments to existing statutes governing LNG export, in 2005, Congress enacted the EAct to ensure that LNG exports complied with federal law.⁸² The EAct expanded the scope of the NGA and reaffirmed the Federal Power Commission's role and exclusive authority over state governments in developing onshore LNG terminals.⁸³ Today, the EAct has multiple subparts regulating LNG applications, importing and exporting LNG, and includes regulation of "LNG terminals," whereas the previous provisions only applied to natural gas terminals.⁸⁴

The EAct has three major changes that re-regulated LNG application criteria.⁸⁵ First, the EAct amended the NGA to expand FERC's exclusive power to approve an LNG application for siting construction, expansion, or operation.⁸⁶ The EAct also mandated state consultation on safety issues of proposed terminals.⁸⁷ For example, states can now provide input on consulting and advising the Commission regarding state and local considerations.⁸⁸ Second, the EAct mandated that pre-filing procedures

⁸⁰ See Hollis, *supra* note 32, at 10 (explaining how the MARAD issues quicker decisions than other governmental agencies). Under the MTSA, it permits jurisdictional review to the Coast Guard who manages the safety, security, and environmental risks of a terminal. *Id.*

⁸¹ See *infra* Part II.B.3 (detailing the provisional changes to LNG exportation and how the EAct further defined the Commission's role for applicants).

⁸² See Jacob Dweck et al., *Liquefied Natural Gas (LNG) Litigation after the Energy Policy Act of 2005: State Powers in LNG Terminal Siting*, 27 ENERGY L. J. 473, 477 (2006) (clarifying the FERC's authority); Lute, *supra* note 32, at 642 (mandating direct federal and state agencies to comply with the Commission, which is the lead agency for federal authorization of LNG applications).

⁸³ See Kransdorf, *supra* note 26, at 48-54 (explaining the jurisdictional battle between California Sound Energy Solutions' proposed LNG import terminal in Long Beach, California and how the FERC asserted exclusive jurisdiction over the LNG terminal); Lute, *supra* note 32, at 642 (providing a background on the EAct). The EAct was a response to this legal challenge where it was found that the FERC has preemptive authority over state terminal development. Kransdorf, *supra* note 26, at 48-54.

⁸⁴ See Lute, *supra* note 32, at 642-45 (detailing the provisions of the EAct and its applicability to LNG).

⁸⁵ See Hollis, *supra* note 32, at 15-17 (explaining the EAct provisions).

⁸⁶ See *id.* (detailing the important EAct provisions that apply to LNG); Dweck et al., *supra* note 82, at 474 (discussing the expedited process and the FERC's jurisdiction).

⁸⁷ See Hollis, *supra* note 32, at 15-17 (explaining the provisional changes to LNG).

⁸⁸ See *supra* Part II.B.1 (explaining the local considerations of the NGA, 15 U.S.C. § 717b-1). The EAct allows states to provide advisory reports, and give safety reports, in addition

under the NEPA must be filed for both new projects and expansion projects for LNG applicants.⁸⁹ Last, the EAct contains a provision supporting free-market policies by allowing applicants to assume costs and prohibiting the Commission from conditioning application approval on rates, charges, and other service requirements.⁹⁰ Since the enactment of the EAct, administrative agencies such as the DOE and the FERC, redefined their role in LNG export applications.⁹¹

C. Administrative Agencies Involved in Application Criteria

The DOE and the FERC are the two primary administrative agencies that regulate and enforce the provisions of the NGA, the NEPA, and the EAct.⁹² While the NGA provides the statutory framework for reviewing LNG export applications, the DOE authorizes the imports and exports of LNG.⁹³ Since the 1970s, the DOE's primary responsibility is to consider whether an application for export coincides with the public interest

to mandating that the Commission review the local and state concerns thirty days before the filing of an application. Lute, *supra* note 32, at 644. Due to the re-regulation, states now have a growing influence on mandating that applicants provide emergency response plans, cost sharing plans, and address safety violations approval. *Id.* This consultation by states was beneficial because it allowed states to retain authority under the Coastal Zone Management Act, the Clean Air Act, the Federal Water Pollution Control Act, and to have influence on combating complete preemption on terminal development. Hollis, *supra* note 32, at 15-16.

⁸⁹ See 70 Fed. Reg. 60426 (Oct. 18, 2005) (discussing how the FERC established mandatory procedures for applicants' authorization to site and construct a LNG terminal). The EAct created a pre-filing procedure that advocates early participation of all who must file resource reports that aid in the Commission's decisions on environmental impact statements. Lute, *supra* note 32, at 643-44. However, the pre-filing procedures under the EAct are still required to abide by the NEPA notice to interested parties and assessments of environmental impacts. Hollis, *supra* note 32, at 15.

⁹⁰ See Lute, *supra* note 32, at 643-44 (explaining the increased scope that developers or applicants have in economic projects).

⁹¹ See *infra* Part II.C (elaborating on the scope of the DOE and the FERC).

⁹² See *infra* Part II.C (detailing the authorization of the DOE and the FERC). The DOE is an executive agency. *What Is FERC*, FERC.GOV, <http://www.ferc.gov/students/whatisferc.asp> [<http://perma.cc/PZV8-VCEX>]. The FERC is an independent agency that is part of the DOE. *Id.*

⁹³ See *supra* Part II.B.1 (explaining the NGA). Under 15 U.S.C. § 717b of the NGA, the export of LNG and the construction or expansion of LNG facilities is authorized by the DOE. 15 U.S.C. § 717b(c) (2012); see also Office of Fossil Energy, *Liquefied Natural Gas*, U.S. DEP'T OF ENERGY, <http://energy.gov/fe/science-innovation/oil-gas/liquefied-natural-gas> [<http://perma.cc/7PAV-YZUX>] (elaborating on how the DOE assumes the primary responsibility regarding LNG); United States Government Accountability Office, *supra* note 67, at 7 (explaining the rebuttable presumption for the export of natural gas under the public interest standard established by the NGA).

standard and if so the applications are approved "without modification or delay."⁹⁴

The DOE has jurisdiction over the applications for constructing, operating, maintaining, or connecting facilities for the exportation or importation of natural gas to or from a foreign country.⁹⁵ The DOE's formalized procedure is detailed in 10 C.F.R. Section 590.202.⁹⁶ For an application to be approved, the applicant must describe the action sought.⁹⁷ Applicants must specify to the DOE whether it is applying for a long term or short term authorization.⁹⁸ Second, the applicant must

⁹⁴ See Paul F. Forshay et al., *LNG Regulatory Year in Review*, ASSOC. OF CORP. COUNSEL 3 (Dec. 11, 2014), <http://webcasts.acc.com/detail.php?id=731184> [<http://perma.cc/Z3CF-SVHC>] (providing information on the DOE approval on free trade agreements). The DOE established its own broad set of criteria of undefined factors for determining whether an application would not be consistent with the public interest, including factors such as the "domestic need for natural gas proposed for export[,] [a]dequacy of domestic natural gas supply[,] U.S. energy security[,] [i]mpact on the U.S. economy and natural gas prices[,] [i]nternational considerations[, and] [e]nvironmental considerations" to determine the public interest. Jason K. Bennett, *Legal Structures and Commercial Issues for LNG Export Projects – North America & Beyond*, BAKER BOTTS LLP (April 17, 2013), http://www.gastechnology.org/Training/Documents/LNG17-proceedings/04_07-Jason-Bennett-Presentation.pdf [<http://perma.cc/JUP5-CB5V>]. The DOE strives to issue free trade agreements within 90 days. Forshay et al., *supra* note 94, at 3. However, under the current procedure a deadline is not imposed on the DOE to issue non-FTA approvals. *Id.* Typically, the export non-FTA approval process averages less than twenty-four months, but in some instances approval can take more than thirty-six months. *Id.* United States Government Accountability Office, *supra* note 67, at 7 (detailing how since 2010, the DOE "approved 37 of 42 applications to export LNG to FTA countries" but only "approved 9 (3 final and 6 conditional) of 35 applications to export LNG to non-FTA countries").

⁹⁵ See All Gov, *Department of Energy*, <http://www.allgov.com/departments/department-of-energy?detailsDepartmentID=565> [<http://perma.cc/UT7J-VGRH>] (explaining the history and the function of the DOE).

⁹⁶ See 10 C.F.R. § 590.202(a) (2014) (explaining how an application must have the applicant docket number, name, titles, mailing addresses, statement describing the project, and why if the project is deemed inconsistent with the public interest).

⁹⁷ See Salo et al., *supra* note 48, at 68 (explaining the elements set forth in 10 C.F.R. Section 590.202 for an LNG export application). An application must contain: the exact legal name of the applicant, the mailing address, a statement describing the action sought by the DOE, justification if an application is not deemed within the public interest, and the Office of Fossil Energy docket number when available. *Id.*

⁹⁸ See Duncan, *supra* note 28, at 626 (explaining the various types of authorizations). A long-term authorization grants an exportation license for longer than two years and requires that an applicant identify the sellers of gas, the markets in which the gas is to be sold, the terms of the sale agreement, and a start date. *Id.* These long term contracts are structured on a determinative basis based on prices set for volume traded. Susan L. Sakmar, *Global Gas Markets: The Role of LNG in the Golden Age of Gas and the Globalization of LNG Trade*, 35 HOUS. J. INT'L L. 655, 684 (2013). Typically, the regulations of natural gas terminals have been through long-term contracts, which last for durations of twenty to twenty-five years. *Id.* Whereas, a short-term agreement duration is for two years and requires the submission of a start date and a copy of the gas purchase, not a sale contract. Duncan, *supra* note 28, at 626.

describe the scope of the project, the source of gas supply to be imported or exported, and identify the participants in the transaction.⁹⁹ Third, the applicant must state the terms of the transaction, related costs, prospective customers, and potential environmental impacts of the project.¹⁰⁰ Fourth, the applicant must verify all agreements related to contracting and purchasing.¹⁰¹ Last, applicants are required to file a concurrent application to the FERC, which oversees the environmental review process mandated by the NEPA.¹⁰² All LNG export applications must be reviewed by the FERC, comply with the NEPA requirements, and be published in the Federal Register.¹⁰³ If during the application review, there are no protests or objections to the planned project use within sixty days, the project is granted.¹⁰⁴ If there is an objection, however, then the company has thirty days to resolve it, and if the objection is not resolved, then the application is treated as a project-specific authorization.¹⁰⁵

Recently, proponents argued for short term contracts because short-term contracts are more flexible and allow for spot market purchases. Office of Oil and Gas, *supra* note 35, at 4. Likewise, proponents argued that the rise in spot market purchases will outgrow long term contracts for LNG. Peter R. Hartley, *Recent Developments in LNG Markets (Working Paper)*, JAMES A. BAKER III INST. FOR PUB. POL'Y RICE UNIV. 3 (Dec. 23, 2014), <http://bakerinstitute.org/media/files/files/a81c74e2/CES-pub-DevelopmentsinLNG-122314.pdf> [<http://perma.cc/4GPM-7TME>].

⁹⁹ See 10 C.F.R. § 590.202(b)(1)–(3) (providing the application process).

¹⁰⁰ See *id.* § 590.202(b)(4)–(7) (listing the specific requirements for applications); Salo et al., *supra* note 48, at 68 (explaining the requirements for projects to have statements of scopes, the volume of natural gas involved, dates for proposed export including commencement or completion, information regarding the facilities, the source and security of gas when traded, terms, regions for the gas, and potential environmental impact).

¹⁰¹ See 10 C.F.R. § 590.202(c) (describing how an application will not be considered complete without the requisite support and opinion of counsel of corporate capacity and documentation).

¹⁰² See Duncan, *supra* note 28, at 626 (explaining how blanket certificate applications allow for unrestricted activity because case-specific certificates for each individual project are not needed); *infra* Part II.C (discussing the FERC). Blanket certificates are most beneficial for companies because routine permits are not required and allow companies to perform as many projects desired as long as it falls within the parameters set by the FERC. Duncan, *supra* note 28, at 626.

¹⁰³ See Duncan, *supra* note 28, at 626 (stating the application procedure under the DOE). All long term applications should identify: (1) the supplier or purchaser of the natural gas to be imported and/or exported; (2) the name of the U.S. transporter(s); (3) the point(s) of entry or exit on the international border; (4) the geographic market(s) served; and (5) a start date. Office of Fossil Energy, *supra* note 57.

¹⁰⁴ See Duncan, *supra* note 28, at 626 (outlining the approval process by the DOE/FE).

¹⁰⁵ See *id.* (providing the review process for an application). A project-specific certificate authorization occurs when there is an issue with the notice of a planned project when the issue is not resolved, and the protest is not withdrawn or dismissed. *Id.* Thus, the planned project will not be authorized under the company's blanket certificate, but will instead be treated as if the proposed project were presented in an application for project-specific certificate authorization. *Id.* “[A] blanket certificate issued pursuant to Section 7(c) of the

Similar to the DOE, the FERC also has a mandatory role in regulating and overseeing the energy industry, including LNG applications.¹⁰⁶ Like the DOE, the FERC regulates and enforces the provisions of the NGA, the NEPA, and the EPAct.¹⁰⁷ In the 1970s, the FERC stepped into the Federal Power Commission's shoes by overseeing the wholesale and transportation of natural gas and electricity.¹⁰⁸ Today, the FERC is an independent agency that regulates the domestic sale of natural gas and the environmental considerations regarding natural gas to the public.¹⁰⁹

The FERC's major responsibility is to oversee the enforcement and completion of the NEPA for LNG export applications.¹¹⁰ As mandated by the NEPA pre-filing procedure, first the FERC requires that applicants begin the review six months before filing a formal application.¹¹¹ Second, each application is assigned a docket number and the preliminary review of the project commences.¹¹² Third, a LNG application must comply with

[NGA], a natural gas company may undertake a restricted array of routine activities without the need to obtain a case-specific certificate for each individual project." *Blanket Certificates*, FERC (Feb. 18, 2015), <http://www.ferc.gov/industries/gas/indus-act/blank-cert.asp> [<http://perma.cc/QD6B-3PP2>].

¹⁰⁶ See *infra* Part II.C (elaborating on the duties of the FERC).

¹⁰⁷ See *infra* Part II.C (detailing the authorization of the DOE and the FERC).

¹⁰⁸ See *supra* Part II.B.1 (detailing the split in authority of the Federal Power Commission with the creation of the DOE and the FERC). See also Harmon, *supra* note 57, at 617 (describing the responsibilities of the FERC). "During the energy crisis of the 1970s, Congress passed the Department of Energy Organization Act of 1977 to consolidate various energy-related agencies into the DOE." *Id.* "The Department of Energy Organization Act of 1977 transferred [authority] to the five-member Federal Energy Regulatory Commission." *Natural Gas in History*, *supra* note 14. Currently, the FERC has authority over the electric power, natural gas industries, oil pipeline transportation, including setting the rates and charges for the transportation and sale for resale of natural gas in interstate commerce. *Id.*

¹⁰⁹ See *Natural Gas in History*, *supra* note 14 (detailing how the FERC has regulatory authority over LNG terminals in the same way it does over natural gas pipelines, including imposing economic regulation and open access terms of service). For example, "many of the tasks the FERC undertakes relate to the natural gas industry." Kransdorf, *supra* note 26, at 54. As of May 2006, the FERC now has the authority to engage in NGA authority of siting, constructing, expansion or operation of new LNG export facilities. Salo et al., *supra* note 48, at 90. This authority applies to LNG terminals located onshore or in state waters, the agency responsible for permitting the export facilities is the FERC pursuant to Section 3 of the NGA, 15 U.S.C. § 717b(e). Joan M. Darby, *The Role of FERC and the States in Approving and Siting Interstate Natural Gas Facilities and LNG Terminals After the Energy Policy Act of 2005 – Consultation, Preemption, and Cooperative Federalism*, 6 TEX. J. OIL GAS & ENERGY L. 335, 339–40 (2011).

¹¹⁰ See Kransdorf, *supra* note 26, at 54 (stating how the FERC oversees the "economic, environmental, and safety interests of the American public."); *supra* Part II.B.2 (describing the NEPA's procedure).

¹¹¹ See Salo et al., *supra* note 48, at 91 (explaining the policy of why export applications must be sent and filed six months in advance to identify any issues in an application).

¹¹² See *id.* at 91–92 (providing the review procedures); United States Government Accountability Office, *supra* note 67, at 2 ("Since 2010, FERC has approved 3 LNG export

the NEPA categorical exclusion, economic assessment, and environmental impact, previously mentioned; and interested stakeholders must discuss and answer questions regarding the application process.¹¹³ Fourth, during the economic impact statement review, the FERC prepares a Cryogenic Design Review.¹¹⁴ During the economic assessment and environmental review process, the FERC considers the comments in the Federal Register, conducts site visits, and discusses the local, state, and federal impacts of the proposed development.¹¹⁵ Similar to the DOE review procedure, if an applicant has not followed the above procedure, then an application cannot be granted.¹¹⁶

facilities for construction and operation, including 2 facilities in 2014, and is reviewing 14 applications[.]”). Many of these export LNG applications are pending with many still remaining in the pre-filing stage. *Id.*

¹¹³ See *supra* Part II.B.2 (explaining the NEPA review process). See also Federal Energy Regulatory Commission, *Pre-filing Environmental Review Process*, <http://www.ferc.gov/help/processes/flow/lng-1-text.asp> [<http://perma.cc/4CVW-Z9YL>] (listing the pre-filing environmental review process under the FERC). The FERC application process requires the following five steps: applicant assesses market need and considers project feasibility; applicant studies potential site locations; applicant identifies stakeholders; applicant requests use of the FERC’s pre-filing process; and applicant holds open house to discuss the project. *Id.* The FERC process mandates a twelve-step procedure. *Id.* Primarily, the duties of the FERC are to receive the applicant’s request to conduct its review of the project within the FERC’s NEPA pre-filing process. *Id.* Next, the FERC issues Notice of Intent for Preparation of an Environmental Impact Statement (“EIS”) or Environmental Assessments (“EA”), which allows the NEPA to seek public comments on the project. *Id.* After the final EIS or EA is reviewed then the statement is made a public record of its decision addressing how the findings of the EIS, including consideration of alternatives, were incorporated into the agency’s decision-making process. National Environmental Policy Act, *supra* note 69.

¹¹⁴ See Kransdorf, *supra* note 26, at 44 (mentioning the detailed technical review standard for design). A Cryogenic Design is a type of design, used for when temperatures are very low, to ensure that LNG spills do not occur. Medical Dictionary, *Cryogenic*, THE FREE DICTIONARY, <http://medical-dictionary.thefreedictionary.com/cryogenic> [<http://perma.cc/C7QQ-8LCK>].

¹¹⁵ See Darby, *supra* note 109, at 343 (explaining the FERC review process for applications); Federal Energy Regulatory Commission, *supra* note 113 (detailing the twelve-step procedure under the FERC and the approval process upon review of the EIS and the ten-step procedure for EA).

¹¹⁶ See Federal Energy Regulatory Commission, *supra* note 113 (detailing relief afforded if during the approval process an application is denied). One remedy for applicants is that if the project is denied, the applicant or the public can ask the FERC to rehear a case or refer the case to the FERC Administrative Law Judge. *Id.* Also, an applicant can sue the FERC directly. *Id.*

D. Current Status of LNG Policy and Application Criteria

There have been two recent federal developments affecting LNG export applications.¹¹⁷ On August 15, 2014, the DOE issued an Order proposing to expedite export applications from the lower forty-eight states to countries without a free trade agreement with the United States.¹¹⁸ This Order explained a major change to the existing review procedures for LNG export applicants.¹¹⁹ The DOE listed four reasons for its proposed policy change to the exportation process.¹²⁰ First, the Order eliminated the Order of Precedence.¹²¹ Second, LNG export applications will only have to pass the NEPA review instead of the conditional decisions being granted before final action.¹²² Third, the quality of information regarding decisions will improve overall.¹²³ Last, the proposed change will allow the DOE to focus on applications that actually will be processed.¹²⁴

The Order did not propose to amend the conditional order or 10 C.F.R. Section 590.402.¹²⁵ Rather, the notice specified that the DOE would take

¹¹⁷ See *infra* Part II.D (elaborating on the current status of LNG exports with the DOE notice of proposed change and the congressional bills).

¹¹⁸ See Notice, 79 Fed. Reg. 48132 (Aug. 15, 2014) (stating the proposed change).

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *Id.* The Order of Precedence was established in December 2012 for non-FTA export applications. Forshay et al., *supra* note 94, at 5. The Order of Precedence established three categories of export applications determined on a first come first serve basis: pending DOE applicants already approved to use FERC's pre-filing process, as of December 5, 2012; pending DOE applicants that had not yet received approval to use FERC's pre-filing process, as of December 5, 2012; and DOE applications received after December 5, 2012. *Id.*

¹²² See Notice, 79 Fed. Reg. 48132 (Aug. 15, 2014) (explaining the shortened proposed review process).

¹²³ See *id.* (detailing the change in the DOE policy to the export process).

¹²⁴ See *id.* (suggesting the importance for why the DOE changed its review procedures).

¹²⁵ See 10 C.F.R. § 590.402 (2014) (defining the conditional order). "The conditional order shall include the basis for not issuing a final opinion and order at that time and a statement of findings and conclusions. The findings and conclusions shall be based solely on the official record of the proceeding." *Id.* While the DOE has the exclusive authority to approve or deny applicants based on the above procedure, the DOE also has authority to issue conditional decisions for export applications of natural gas before the DOE completes its review process. Notice, 79 Fed. Reg. 48133 (Aug. 15, 2014). Typically, the DOE issues these conditional decisions for applications to export to non-FTA countries after completion of the DOE's notice and comment process, but before completion of the NEPA review by FERC. Jeff Lane et al., *United States: US LNG Exports: Policy Update*, MONDAQ (July 1, 2014), <http://www.mondaq.com/unitedstates/x/324134/Oil+Gas+Electricity/US+LNG+Exports+Policy+update> [<http://perma.cc/SL9J-2WHM>]. These conditional authorizations are still subject to the NEPA review of the environmental hazards, which could render a conditional authorization void. *Id.* Over the last three years, the DOE has authorized eight conditional authorizations to export to countries without free trade agreements. Notice, 79 Fed. Reg. 48133 (Aug. 15, 2014). The authorizations included: the Oregon LNG on July 31, 2014; The

final action once the DOE had enough information to base a public interest determination after the NEPA review.¹²⁶ This proposed change provided that the DOE would issue final public interest determinations only after a project has completed the NEPA process, instead of its previous procedure of issuing conditional authorizations.¹²⁷

Most recently, federal legislation has been drafted on this same issue.¹²⁸ On January 28, 2015, the House of Representatives passed the LNG Permitting Certainty and Transparency Act, which mandated expedited review of applications sent to the DOE, the FERC, and the

Jordan Cove Energy Project, L.P. in March 24, 2014; The Cameron LNG, LLC, on February 11, 2014; The Freeport LNG Expansion, L.P. on November 15, 2013; the Dominion Cove Point LNG, LP, on September 11, 2013; The Lake Charles Exports, LLC, on Aug. 7, 2013; The Freeport LNG Expansions, L.P. on May 17, 2013; and The Sabine Pass Liquefaction, LLC, May 20, 2011. *Id.* Many LNG export applicants seek conditional authorization to avoid being excluded if more restrictive limits on LNG exports are established in the future. Forshay et al., *supra* note 94, at 4.

¹²⁶ See Notice, 79 Fed. Reg. 48133 (Aug. 15, 2014) (explaining the DOE procedure). Under the new order, an application is deemed complete and ready for the DOE's action once the following has been completed:

- (1) For those projects requiring an Environmental Impact Statement (EIS), 30 days after publication of a Final EIS; (2) for projects for which an Environmental Assessment (EA) has been prepared, upon publication by DOE of a Finding of No Significant Impact (FONSI); or (3) upon a determination by DOE that an application is eligible for a categorical exclusion pursuant to DOE's regulations implementing NEPA, 10 CFR 1021.410, Appx. A & B.

Id.

¹²⁷ See Christopher A. Smith, *A Proposed Change to the Energy Department's LNG Export Decision-Making Procedures*, ENERGY.GOV (May 29, 2014), <http://energy.gov/articles/proposed-change-energy-departments-lng-export-decision-making-procedures> [<http://perma.cc/7X5V-JQBH>] (detailing the proposed change to existing policy). The DOE indicated how the revised procedures would not affect the continued validity of the conditional orders that the DOE has previously approved or issued. Office of Fossil Energy, *Order of Precedence – Non-FTA LNG Export Applications*, ENERGY.GOV (Aug. 15, 2014), <http://energy.gov/fe/downloads/order-precedence-non-fta-lng-export-applications> [<http://perma.cc/VA2K-D2NE>]. Under the new procedure, the DOE may then reconsider previous conditional authorizations only after information has been gather based on its environmental review. *Id.*

¹²⁸ See Nick Snow, *US House Approves Bill Aimed at Increasing LNG Exports*, OIL & GAS J. (Jan. 28, 2015), <http://www.ogj.com/articles/2015/01/us-house-approves-bill-aimed-at-increasing-lng-exports.html> [<http://perma.cc/HTV6-C3UG>] (detailing the status of the U.S. House of Representatives Bill, LNG Permitting Certainty and Transparency Act). The LNG Permitting Certainty and Transparency Act was passed a day before the Senate Energy and Natural Resources Committee held its hearing on LNG exports. *Id.* The House Bill, H.R. 351, aimed at increasing the U.S. LNG exports by requiring the DOE to determine whether a project was in the national interest once its federal environmental reviews were complete. *Id.* Upon passage, the bill was then sent to the Senate Energy and Natural Resources Committee. H.R. 351, 114th Cong. (2015).

MARAD, regarding exportation.¹²⁹ Although this bill has passed through the House of Representatives, the bill still needs to be approved by the

¹²⁹ H.R. 351, 114th Cong. (2015) (detailing the current status of LNG exportation). This bill was introduced on January 14, 2015, by Ohio Representative, Bill Johnson, a member of the House Energy and Commerce Committee. *Id.* The bill, The LNG Permitting Certainty and Transparency Act, was passed on January 28, 2015, with a 277–133 vote. *Id.* The bill directed proposals that asked the DOE, the FERC, and the MARAD to issue approvals for siting, constructing, expanding, or operating LNG export facilities within thirty days after: the conclusion of the review to site, construct, expand, or operate the LNG facilities required by the NEPA; or date of enactment of the Act. *Id.* The LNG Permitting Certainty and Transparency Act would amend the NGA “to set as a condition for approval of any authorization to export LNG that the DOE Secretary require the applicant to disclose publicly the specific destination or destinations of any such authorized LNG exports.” *Id.* However, this Act would not allow applicants to skip the FERC review process or bypass an environmental impact study under the NEPA, but would allow the DOE to maintain the authority to disapprove the application if they see fit. Charlie Passut, *House to Consider LNG Permitting Bill; Senate Keeps Debating Keystone XL*, NATURAL GAS INTEL (Jan. 27, 2015), <http://www.naturalgasintel.com/articles/101174-lng-permitting-bill-reaches-house-floor-senate-keeps-debating-keystone-xl> [<http://perma.cc/D7EM-4GKG>]. The LNG Permitting Certainty and Transparency Act requires that the NEPA’s three-step review procedures are still followed. H.R. 351, 114th Cong. (2015). The NEPA review is deemed conclusive after the following:

- (1) 30 days after a publication of a required Environmental Impact Statement if the project needs one;
- (2) 30 days after publication by DOE of a Finding of No Significant Impact if the project needs an Environmental Assessment; and
- (3) upon a determination by the lead agency that an application is eligible for a categorical exclusion pursuant to regulations under NEPA.

Id. The LNG Permitting Certainty and Transparency Act bill was sent to the Senate Energy and Natural Resources Committee and the Senate modified the Act to mandate a forty-five day review instead of the thirty day review by the NEPA. S. 33, 114th Cong. (2015). The bill has not been passed into law. *Id.* Similar to the LNG Permitting Certainty and Transparency Act, during the 113th Congress, a similar bill was proposed by Representative Corey Gardner, called the Domestic Prosperity and Global Freedom Act. H.R. 6, 113th Cong. (2014). This bill is similar to the LNG Permitting Certainty and Transparency Act, which sought to expedite review of LNG by issuing a decision on authorization applications for authorization to export natural gas within thirty days after the conclusion of the NEPA review or the date of enactment. *Id.* Like the LNG Permitting Certainty and Transparency Act, the Domestic Prosperity and Global Freedom Act suggested “to set, as a condition for approval of any authorization to export LNG, that the DOE Secretary require the applicant to disclose publicly the specific destination or destinations of any such authorized LNG exports.” *Id.* While this bill passed the House and was received by the Senate, the bill was not passed. *Id.* However, in 2015, Jim Bridenstine reintroduced the Domestic Prosperity and Global Freedom Act. H.R. 89, 114th Cong. (2015). The Domestic Prosperity and Global Freedom Act of 2015 sought to expedite review of LNG by issuing a decision on authorization applications for authorization to export natural gas within thirty days after the conclusion of the NEPA review or the date of enactment. *Id.* Currently, the bill has only been introduced into the House of Representatives. *Id.*

Senate, enrolled by both the House and Senate, and signed by the President, before it is passed into law.¹³⁰

III. ANALYSIS

Over the past fifty years, Congress expanded the scope of federal legislation to encompass the changing sources of power.¹³¹ Despite these amendments to provisions regulating natural gas, the current LNG application criteria under the DOE and FERC are still inadequate.¹³² For example, the current additions to existing statutes and policies fail to boost international demand for LNG.¹³³ Moreover, potential reduction of greenhouse emissions is limited due to the delay in application approvals.¹³⁴ To alleviate these problems and expand LNG exports to new international markets, LNG export applications should be issued in a shorter time span by modifying the NEPA review standard.¹³⁵ Additionally, an independent agency, similar to the MARAD, should be created, which would provide direct oversight over LNG terminals after the terminal review process is finalized.¹³⁶ While the NGA created the

¹³⁰ See The United States House of Representatives, *The Legislative Process*, http://www.house.gov/content/learn/legislative_process/ [http://perma.cc/KTJ9-T7DN] (explaining the legislative process). In order for a bill to become a law a series of procedures are followed. *Id.* First, a representative sponsors a bill and then it is assigned to a committee for study. *Id.* Second, after committee review, the bill is sent to the floor where a majority vote is required. *Id.* Upon majority approval, the bill moves to the Senate. *Id.* In the Senate, the bill is assigned to another committee and, if released, debated and voted on. *Id.* Third, a bill is voted on where a majority passes the bill. The United States House of Representatives, *supra* note 130. Fourth, a conference committee works out any differences between the House and Senate versions of the bill and the resulting bill returns to the House and Senate for final approval. *Id.* Last, the President has ten days to sign or veto the enrolled bill. *Id.*

¹³¹ See *supra* Part II (providing the background on LNG and the legislative acts that pertain to LNG regulation).

¹³² See *infra* Part III (analyzing the current problem with LNG regulation).

¹³³ See *Testimony of Martin J. Durbin, President and CEO, America's Natural Gas Alliance*, SENATE ENERGY & NATURAL RES. COMM. 6 (June 19, 2014) (statement by Martin J. Durbin), http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=421d53dc-c7dd-4027-adcb-e81c8a08dadd [http://perma.cc/BU87-ZPQ9] (providing commentary on S. 33, 114th Cong. (2015)). Dick Durbin, Illinois Senator, indicated that "global demand for natural gas is expected to increase between eighteen and thirty eight bcf/d per day by 2025." *Id.* If the United States does not provide a greater level of certainty by investing in the LNG process, the United States will miss any opportunity at becoming a dominant player in the LNG international markets. *Id.*

¹³⁴ See *infra* Part III (analyzing the current problem with LNG regulation).

¹³⁵ See *infra* Part IV (suggesting a four part procedure to amend the current LNG export procedure).

¹³⁶ See *infra* Part IV (recommending a statute to modify the existing LNG policy). In 2015, H.R. 351, 114th Cong. (2015) was passed only in the House of Representatives. H.R. 351,

regulatory framework for natural gas transmission, the DOE's and FERC's enforcement of the NEPA and EPCRA are overall a lengthy processes and more reform to their criteria for applications for LNG exports is required.¹³⁷

Today, the United States is regarded as a leading producer of natural gas and if gas production levels are to increase, then existing LNG export application procedures must be reformed.¹³⁸ Part III of this Note analyzes the statutory restrictions of the NGA, the aforementioned agencies' enforcement of the five statutes, and how the DOE and FERC's extensive review process has hindered global trade and made the overall application process inefficient.¹³⁹ Part III.A evaluates the necessity of LNG export reform.¹⁴⁰ Next, Part III.B analyzes the potential economic and foreign policy benefits from expanded LNG trade.¹⁴¹ Finally, Part III.C assesses the arguments from opponents and supporters of LNG exportation policies and how these perspectives have impacted the legislative process.¹⁴²

A. The "Public Interest" Standard is Discretionary and the DOE Review Process Under Current Federal Regulations is Prolonged

Despite efforts to change the public interest review procedures, the approval of applications for exportation of LNG is too restrictive.¹⁴³

114th Cong. (2015). H.R. 351, indicates that reformation to existing review under the DOE and FERC purview is needed. *Id.*

¹³⁷ See *infra* Part III (explaining why the enforcement of LNG regulation is problematic).

¹³⁸ See *Testimony of Martin J. Durbin, President and CEO, America's Natural Gas Alliance, supra* note 133, at 1 (detailing that the passage of the LNG Permitting Certainty and Transparency Act is a timely bill that must be passed). Martin J. Durbin stated:

The United States is now the leading natural gas producer in the world. And we have an abundant supply of this affordable, reliable resource that will enable us to power our nation for generations to come. A robust natural gas policy will help grow our economy, support our manufacturing sector, strengthen our national security interests, and protect our environment.

Id.

¹³⁹ See *infra* Part III (arguing that the current exportation policy is ineffective).

¹⁴⁰ See *infra* Part III.A (analyzing the current policy and providing suggestions on reform).

¹⁴¹ See *infra* Part III.B (evaluating the foreign policy benefits and the increased global demand).

¹⁴² See *infra* Part III.C (examining supporting and opposing viewpoints on expanded LNG exportation).

¹⁴³ See Matthew Daly, *Liquefied Natural Gas Exports Plan Stir Debate, Raise Environmental Concerns*, HUFF. POST (May 13, 2013), http://www.huffingtonpost.com/2013/05/13/liquefied-natural-gas-export-plans_n_3264694.html [http://perma.cc/5ZET-2VM2] ("Federal law requires the Energy Department to determine that projects are in the public

Under Section 717a and Section 717b of the NGA, the DOE has discretion in export applications depending on the shipped exportation destination of the LNG.¹⁴⁴ For example, if exporting to a nation where there is a free trade agreement, the export application is granted automatically.¹⁴⁵ However, if the application seeks to export natural gas to a nation with which the United States does not have a free trade agreement, the DOE/FE can decide whether to grant an application based on its interpretation of federal legislation.¹⁴⁶

This administrative discretion in interpreting the law is problematic because under the NGA the “public interest” standard is not defined.¹⁴⁷ For example, under the NGA, there are no specific statutory provisions, regulations, or any other legal definitions of the public interest standard governing the issuance of permits under this review.¹⁴⁸ Moreover, the DOE has unlimited discretion in making this public interest determination with respect to non-FTA countries, both in substance and timing.¹⁴⁹ The

interest before granting export permits to countries that do not have free-trade agreements with the U.S.”).

¹⁴⁴ See *supra* Part II.B (explaining the DOE’s discretionary power over LNG export applications through the NGA).

¹⁴⁵ See *supra* Part II.B.1 (discussing the NGA’s applicability to free trade countries). Under 15 U.S.C. § 717b(c), if a country exports to a country where there is a free trade agreement, the sale of LNG is deemed within the public interest and the application should be granted without modification or delay, and not treated as unjust due to national origin. 15 U.S.C. § 717b(c) (2012). For example, if the exportation is geared towards a free trade country then the DOE and the FERC expedite the application and approval process without delay. *Id.* However, if the exportation is to a country that does not have free trade, then the application is scrutinized under a public interest standard. *Id.* This public interest standard is comprised of multiple factors such as the following: domestic need for natural gas, impact on international relations, environmental consideration, impact on energy security, and impact of prior authorizations. Duncan, *supra* note 28, at 628.

¹⁴⁶ See Duncan, *supra* note 28, at 642 (quoting Freeport LNG Expansion, LP, DOE/FE Order No. 3282 (May 17, 2013) at 6, n.311) (explaining the DOE/FE review). “[S]ection 3(a) [of the NGA,] establishes a broad public interest standard and presumption favoring the issuance of export authorizations, the statute does not define ‘public interest’ or identify criteria that must be considered.” Freeport, *supra* note 51, at 6. Since there is not a defined standard, the DOE makes an evaluative decision based on evidence presented in the application process or looks to the DOE/FE’s prior policy decisions. *Id.* at 6.

¹⁴⁷ See Lane et al., *supra* note 125 (discussing the regulation of applications for the export of LNG to nations that have entered free trade agreements and non-FTA agreements); *supra* Part II.B.1 (stating the provision of 15 U.S.C. § 717a).

¹⁴⁸ See Duncan, *supra* note 28, at 628 (explaining the discretion that governmental officials have in defining the public interest standard). When the NGA was passed, the DOE did not establish strict guidelines defining the public interest standard. United States Government Accountability Office, *supra* note 67, at 11–12. However, since its passage the DOE has worked to aid the approval process for applicants. *Id.*

¹⁴⁹ See Lane et al., *supra* note 125 (providing a framework for LNG export applications and the proposed change). However, if the H.R. 351 bill is passed, it will limit the review

DOE established a broad set of criteria of undefined factors to determine whether an application would be consistent with the public interest, including factors such as: the domestic need, adequacy of domestic natural gas supply, U.S. energy security, the impact on the U.S. economy, job creation, balance of trade, geopolitical considerations, and environmental considerations to determine the public interest.¹⁵⁰ While the enabling act gave the DOE broad discretion, the DOE's review of export applications is prolonged.¹⁵¹ Furthermore, the current totality of the circumstances standard is problematic because the public interest standard is not explicitly defined.¹⁵² Thus, this lack of clarity extended the DOE's purview to either approve or reject an application based on numerous unrestricted reasons.¹⁵³

Additionally, the NGA's public interest standard creates too high of a barrier for non-FTA exports and excludes many other countries where LNG could be exported.¹⁵⁴ Section 3, 15 U.S.C. § 717b, of the NGA

procedure of the DOE, the FERC, and the MARAD to thirty days. H.R. 351, 114th Cong. (2015).

¹⁵⁰ See Bennett, *supra* note 94 (presenting information on requirements for non-FTA export authorizations). The DOE examines the cumulative impacts of each application for export. *Id.*

¹⁵¹ See Office of Energy Projects, *North American LNG Import/ Export Terminals Approved*, DEP'T OF ENERGY (Sept. 30, 2014), <http://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf> [<http://perma.cc/H83T-WY4Q>] (detailing the status of approved export LNG applications).

¹⁵² See Freeport, *supra* note 51, at 6 (describing the lack of specificity established by the public interest standard).

¹⁵³ See *supra* Part II.C.1 (discussing the regulations of the DOE under 10 C.F.R. § 590.202). See also Salo et al., *supra* note 48, at 87 (stating the DOE's LNG export policy allows for the DOE to issue orders dependent on its interpretation of public interest). The DOE's authority is as follows:

[T]he DOE noted that its authority under Section 3(a) and 16 of the NGA includes the power "to take actions as necessary to protect the public interest" and "to perform any and all acts and "to prescribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary or appropriate" to carry out its responsibilities."

Id. Since the DOE's public interest standard is undefined, sometimes the DOE interprets the public interest standard from its Orders. Forshay et al., *supra* note 94, at 11. Thus, for subsequent export orders, the DOE may redefine its standard or issue more conditions. *Id.* See also Sabine Pass Liquefaction, LLC, DOE/FE Order No. 2961 at 33 n.45 (May 20, 2011) (explaining how the DOE has the ability to create supplemental orders to protect the public interest); Salo et al., *supra* note 48, at 87 (stating the DOE's LNG export policy allows for the DOE to issue orders dependent on its interpretation of public interest).

¹⁵⁴ See *U.S. Free Trade Agreements*, *supra* note 57 (listing the free trade countries). The current policy is limited to only countries with free trade agreements. *Id.* In the Sabine Pass Order, the "DOE declined to review the application for exports to WTO [World Trade Organization] countries under the FTA standard of review." Forshay et al., *supra* note 94, at 12. While a public interest standard is required for exports of LNG, the United States' policy does not impose a public standard for imports of LNG from non-FTA countries. Kennedy,

mandates that if exporting to a nation where there is a free trade agreement, the exporting application is granted without modification or delay and is not scrutinized under the public interest standard.¹⁵⁵ This process is problematic because the majority of LNG projects awaiting authorization to export LNG are countries without a free trade agreement.¹⁵⁶ As mentioned above, the DOE's totality of the circumstances test negatively impacts the United States' influence on trade.¹⁵⁷

In addition to the extensive discretion found in the NGA, the DOE's review procedures under 10 C.F.R. Section 590.202 are also not defined.¹⁵⁸ Like the NGA's public interest standard, most of the criteria set forth in 10 C.F.R. Section 560.202 provides little guidance regarding what must be shown to meet the requirement that the applicant state the justification for export and the reasons the export is not inconsistent with the public interest.¹⁵⁹ For instance, the factors listed under Section 590.202, such as the dates of commencement and completion of the proposed export, are not precisely defined.¹⁶⁰ This oversight is problematic because while applicants are required to provide precise information regarding sources of gas supply before procurement, it is not feasible that during the initial application procedure applicants will have this precise information before an application is approved or negotiated with potential purchasers.¹⁶¹

supra note 46, at 137-38. Currently, under the existing policy the United States can receive imports from non-FTA countries, but not export to these countries. *Id.* For example, the United States does not have free trade agreements with countries such as Trinidad and Tobago, Qatar, and Algeria. *Id.* Thus, it would appear that the current export policy is imbalanced as the public interest standard is only applicable in the authorization of exports facilities but not to import facilities from non-FTA countries. *Id.*

¹⁵⁵ See *supra* Part II.B.1 (discussing the NGA's applicability to free trade countries). For example, if the exportation is geared towards a free trade country, then the DOE and the FERC approve the application without delay. 15 U.S.C. § 717b(c) (2012). However, if the exportation is to a non-FTA country, the application is scrutinized under a "public interest" standard. *Id.*

¹⁵⁶ See Duncan, *supra* note 28, at 627 (detailing how approximately "96 percent of current global LNG demand" is based upon export applications awaiting approval to non-FTA countries).

¹⁵⁷ See *infra* Part III.B (analyzing the demand for American LNG in the reemerging LNG international market).

¹⁵⁸ See *supra* Part II.C (discussing the regulations of the DOE under 10 C.F.R. § 590.202).

¹⁵⁹ See Salo et al., *supra* note 48, at 68-70 (explaining how the DOE application may pose as a problem as applicants may not have the precise information to complete the application).

¹⁶⁰ See *id.* at 71 ("[S]ome of the application requirements of 10 C.F.R. § 590.202 present a potential LNG exporter with a chicken and egg dilemma: at what point does it have enough information and contractual commitments to provide all 'applicable' information?").

¹⁶¹ See *id.* (stating how many of the DOE requirements are unfeasible during the normal course of business negotiations with potential purchasers are not finalized).

Thus, these generalized standards, required at the first level of review, have made the application process very discretionary.¹⁶²

Furthermore, the current statutes and regulatory enforcement sustains the DOE's discretionary review of applications, and fails to specify a set time period for completed review of applications.¹⁶³ The application process for an LNG export terminal has numerous requirements that lengthen the overall approval process.¹⁶⁴ The various review procedures required by the governing statutes and enforcement agencies (i.e. NGA, NEPA, DOE and FERC) lengthen the review process.¹⁶⁵ Currently, there remains numerous pending applications for export of LNG.¹⁶⁶ Although the DOE articulated a change in procedure

¹⁶² See *id.* at 71 (discussing a chicken and egg dilemma for the back and forth procedure for application information).

¹⁶³ See *supra* Part II.D (detailing the DOE's proposed policy change).

¹⁶⁴ See Forshay et al., *supra* note 94, at 3 (stating that while the DOE claims to review applications in six to eight week intervals, applications to non-FTA countries can take twenty four to thirty six months). Under the existing review procedure there is not a specified deadline on the DOE to issue non-FTA approvals. *Id.*

¹⁶⁵ See *supra* Part II.B.1 (discussing the NGA's procedure); *supra* Part II B.2 (explaining the NEPA's pre-filing procedure); *supra* Part II.C (listing the DOE's four-part review under 10 C.F.R. § 590.202 and the FERC application procedure). To illustrate this extensive approval process in building an LNG export facility, an application must first be filed and receive authorization from the DOE and FERC. Salo et al., *supra* note 48, at 68-70. However, the problem is that most of the criteria set forth in 10 C.F.R. Section 560.202 is not extensively defined. *Id.* at 70. Second, the review process under the DOE's application procedure requires that an applicant must apply either for a long or short-term authorization. Duncan, *supra* note 28, at 626. Unlike a short term authorization that lasts for only two years, which does not require the submission of the start date and copies of the gas purchase and sale contracts, a long term authorization requires that applicants submit "the identity of the sellers of gas, the markets in which the gas is to be sold, and the terms of the sale agreement along with a start date." *Id.* (internal quotation omitted). Finally, the third process that lengthens the review process are the NEPA pre-filing procedures, mandate that a proposed export project will have to pass the NEPA review, the Environmental Impact Statement review, and other federal regulation review procedures. *Id.*

¹⁶⁶ See United States Government Accountability Office, *supra* note 67 (explaining the slow approval process for LNG export applicants). As of May 28, 2015, "[t]he Energy Department announced . . . that it has issued a conditional authorization for the Alaska LNG Project . . . to export domestically produced liquefied natural gas (LNG) to countries that do not have a Free trade Agreement (FTA) with the United States." Bob Downing, *DOE Gives Approval to Alaska LNG Export Facility*, OHIO.COM (May 28, 2015), <http://www.ohio.com/blogs/drilling/ohio-utica-shale-1.291290/doe-gives-approval-to-alaska-lng-export-facility-1.595518> [<http://perma.cc/MD43-M84K>]. As of January 6, 2016, the DOE approved six LNG export terminals and they are currently under construction: Sabine, Louisiana; Hackberry, Louisiana; Freeport, Texas; Cove Point, Maryland; Corpus Christi, Texas; and Sabine, Louisiana. Office of Energy Projects, *North American LNG Export Terminals Approved*, DEP'T OF ENERGY (Jan. 6. 2016), <http://www.ferc.gov/industries/gas/indus-act/lng/lng-approved.pdf> [perma.cc/SHX7-VUPE]. As of January 6, 2016, there are thirteen pending applications proposed to the FERC and twelve projects in the pre-filing stage. Office of Energy Projects, *North American LNG Export Terminals Proposed*, DEP'T OF ENERGY (Jan. 6.

and even promised to decide applications on a case-by-case basis, the current extensive process with discretionary procedures, excessive permitting processing requirements, and other environmental federal regulations continues to cause a substantial delay.¹⁶⁷ Thus, the current LNG export application process negatively impacts the United States' ability to remain competitive against other LNG exporting nations.¹⁶⁸

B. Only Through Expansion of LNG Criteria will the United States Compete Internationally and Grab the Re-emerging LNG Market

There is a heightened international demand for American LNG, therefore the current export application criteria under the NGA must be changed.¹⁶⁹ While the current LNG export policy is discretionary and restrictive, American LNG can serve newer global markets with a change in exportation policy.¹⁷⁰ Today, it is estimated that worldwide "LNG trade will [continue to] increase to 35% by 2020."¹⁷¹ However, in order for this demand to increase, the government must change its existing procedure to allow for the abundance of natural gas to serve as a "bridge fuel" to a renewable energy future.¹⁷² Since "[g]lobal demand for natural gas is

2016), <http://www.ferc.gov/industries/gas/indus-act/lng/lng-proposed-export.pdf> [perma.cc/ALZ5-FMP9].

¹⁶⁷ See Kennedy, *supra* note 46, at 136 (explaining the permit and licensing process for a LNG export facility).

¹⁶⁸ See Keith Goldberg, *Sens. Urge DOE Chief to Speed Up LNG Export Reviews*, LAW360 (July 10, 2013, 2:36 PM), <http://www.law360.com/articles/456166/sens-urge-doe-chief-to-speed-up-lng-export-reviews> [<http://perma.cc/RSS6-PX93>] (showcasing the growing support for the expedition of applications).

¹⁶⁹ See *infra* Part III.B (detailing the increase demand for American LNG).

¹⁷⁰ See *Project Sponsors Are Seeking Federal Approval to Export Domestic Natural Gas*, U.S. ENERGY INFO. ADMIN. (Apr. 24, 2012), <http://www.eia.gov/todayinenergy/detail.cfm?id=5970> [<http://perma.cc/DM99-FGAX>] (explaining how sponsors for LNG projects have been applying to the DOE for authorization to export LNG produced from domestic natural gas and to the FERC for approval to build liquefaction facilities to export to international markets).

¹⁷¹ Mike Hightower et al., *Guidance on Risk Analysis and Safety Implications of Large Liquefied Natural Gas (LNG) Spill Over Water*, SANDIA NAT'L LABS. 12 (Dec. 2004), http://www.energy.ca.gov/lng/documents/2004-12_SANDIA-DOE_RISK_ANALYSIS.PDF [<http://perma.cc/M7E5-89NV>].

¹⁷² See Stephen P.A. Brown et al., *Natural Gas: A Bridge to a Low-Carbon Future?*, NAT'L ENERGY POL'Y INST. (Dec. 2009), <http://www.rff.org/RFF/Documents/RFF-IB-09-11.pdf> [<http://perma.cc/M8VZ-9PVV>] ("[N]atural gas yields [carbon dioxide] emissions that are about 45 percent lower per Btu than coal and 30 percent lower than oil, its apparent abundance raised the possibility that natural gas could serve as a bridge fuel to a future with reduced [carbon dioxide] emissions."). Natural gas can serve as a bridge fuel because it is a clean burning fuel, a way to lower global emissions, and can serve as a fuel to meet the growing demand for an alternative power source. Sakmar, *supra* note 98, at 665. "This view acknowledges that the abundance of natural gas, particularly U.S. shale gas, creates an

growing three times faster in countries that do not have developed economies," and if energy regulation is expanded to allow for the exportation to new markets, then the increased demand to both Asian and European countries will enhance the overall American economy.¹⁷³ Trade in LNG should continue to globalize in the coming years and LNG has the potential to be used as "glue" to link and develop new global gas markets.¹⁷⁴

This Part analyzes the heightened international demand and how statutory regulations and policies are not conducive to expanding to these new markets.¹⁷⁵ Part III.B.1 evaluates the Asian market demand and how its transition from reliance on nuclear and coal power energy sources to natural gas energy sources will cause an increased demand for LNG.¹⁷⁶ Part III.B.2 then examines the potential European market demand and the political influence that the United States could have if the exporting policies were changed.¹⁷⁷

1. Asian LNG Market Demand Will Create Advantageous Foreign Policy Benefits

The DOE and the FERC must reform their application criteria for exports of LNG by narrowing the provision and interpretation of the

opportunity to utilize more natural gas to displace coal or oil, thereby significantly reducing [carbon dioxide] emissions." *Id.* John Podesta & Timothy E. Wirth, *Natural Gas: A Bridge Fuel for the 21st Century*, CTR. FOR AM. PROGRESS (Aug. 10, 2009), <http://www.americanprogress.org/issues/green/report/2009/08/10/6513/natural-gas-a-bridge-fuel-for-the-21st-century/> [<http://perma.cc/5LR3-4CDD>] (arguing how natural gas can serve as a "bridge fuel" to a "21st-century energy economy that relies on efficiency, renewable sources, and low-carbon fossil fuels").

¹⁷³ Harmon, *supra* note 57, at 624. One source states:

Advances in drilling techniques including hydraulic fracturing have pushed U.S. natural gas output to a record every year since 2011 and made the country the world's largest producer. U.S. supplies will compete with cargoes from Qatar and Australia, two of the biggest exporters, shifting global movements of the super-chilled fuel.

Christine Buurma & Chou Hui Hong, *U.S. Gas Boom Turns Global as LNG Exports to Shake Up Market*, BLOOMBERG (Oct. 1, 2014, 10:22 AM), <http://www.bloomberg.com/news/2014-09-30/u-s-gas-boom-turns-global-as-lng-exports-set-to-shake-up-market.html> [<http://perma.cc/HD3N-2GG2>].

¹⁷⁴ See Sakmar, *supra* note 98, at 658 ("[T]here is widespread recognition that LNG is the 'glue' linking global gas markets and indeed, the Golden Age of Gas would not be possible without LNG.").

¹⁷⁵ See *infra* Part III.B (examining international demand for LNG).

¹⁷⁶ See *infra* Part III.B.1 (evaluating Asian market demand if LNG export policies were changed).

¹⁷⁷ See *infra* Part III.B.2 (analyzing the European market demand if LNG export policies were changed).

public interest standard.¹⁷⁸ The current federal policies are inadequate and do not support expanded trade to non-free trade countries, which narrows the potential benefits to foreign policy.¹⁷⁹ Under the current policy, if the applicant is not selling to a free trade country, then under Section 3, 15 U.S.C. § 717b, the application is not deemed as a first sale within the meaning of the NGA.¹⁸⁰ Moreover, under § 717b(c), if the United States is not exporting to a free trade country, then there is not an expedited review process.¹⁸¹ Thus, the current policy, of prioritized review based upon status of a free trade agreement, will continue to negatively impact the economic market.¹⁸²

If the United States changes its current regulation under § 717b, it could potentially become a global leader in the LNG Asian market.¹⁸³

¹⁷⁸ See Freeport, *supra* note 51, at 6 (explaining the DOE/FE review). “[S]ection 3(a) [of the NGA,] establishes a broad public interest standard and presumption favoring the issuance of export authorizations, the statute does not define ‘public interest’ or identify criteria that must be considered.” *Id.*

¹⁷⁹ See *supra* Part III.A (detailing how LNG export policies restrict trade and impede on potential new markets for natural gas).

¹⁸⁰ See 15 U.S.C. § 717b (2012) (outlining the first sale process for export applicants of LNG where there is an existing free trade agreement).

¹⁸¹ See *id.* § 717b(c) (summarizing the expedited review process for countries with free trade agreements).

¹⁸² See *id.* (highlighting the expedited review process for countries with free trade agreements). See also Harmon, *supra* note 57, at 624 (speculating the increase in demand for Asian markets, as Japan transitions from reliance on nuclear power to reliance on natural gas). This transition will cause Japan to rely on foreign sources for energy production. *Id.* For example, since the March 2011 Fukushima earthquake disaster in Japan, many of Japan’s energy sources were destroyed, and thus, Japan has increased its consumption for American LNG. Duncan, *supra* note 28, at 619. Before the 2011 earthquake, nuclear generation represented about twenty-seven percent of the power generation. *Japan Is the World’s Largest Liquefied Natural Gas Importer, Second-largest Coal Importer, and Third-largest Net Importer of Crude Oil and Oil Products*, U.S. ENERGY INFO. ADMIN. (Jan. 30, 2015), <http://www.eia.gov/countries/cab.cfm?fips=JA> [<http://perma.cc/UB8U-EQ2Z>]. But following the disaster, Japan became reliant on imported natural gas, low-sulfur crude oil, fuel oil, and coal. *Id.* In addition to Japan, increased demand is also predicted in China. Duncan, *supra* note 28, at 619. For instance, it is estimated that by “2020, China’s gas consumption should move from the level of Japan to the EU and in 2020 China should be the third worldwide consumer after the US and EU.” *Id.* “By 2035, China [will] account[] for 22% of world [energy] demand, up from 17% today.” Sakmar, *supra* note 98, at 671. “China’s energy consumption . . . was more than four times greater than in the previous decade and it contributes 36% to the projected growth in global energy use.” *Id.* at 670 (internal quotations omitted).

¹⁸³ See Eric Yep, *Price for LNG in Asia Falls to Lowest Leveling Nearly Four Years*, WALL ST. J. (Dec. 9, 2014, 2:29 AM), <http://www.wsj.com/articles/price-for-lng-in-asia-falls-to-lowest-level-in-nearly-four-years-1418103186?KEYWORDS=liquefied+natural+gas> [<http://perma.cc/37XA-BXZB>] (“About 235 million metric tons of LNG are traded globally each year and about 75% of that is bought and consumed in Asia.”). See also Duncan, *supra* note 28, at 619 (“During the early and mid-1990s . . . Japan and South Korea accounted for approximately 70 percent [of the LNG export market].”). Since then, Asia has become a perpetual market

Additionally, if the United States exports LNG to Asian markets, primarily China and India, American LNG trade could expand while supplying a cleaner fossil fuel to these markets.¹⁸⁴ While Congress introduced bills such as the Domestic Prosperity Act and Global Freedom Act of 2014, the Domestic Prosperity Act and Global Freedom Act of 2015, and the LNG Permitting Certainty and Transparency Act of 2015, countries such as India and Japan advocate for more change to the existing law to expedite export of U.S. gas.¹⁸⁵ Furthermore, with the increase in Asian markets' demand for natural gas, exportation policies must be reformulated so that these markets can be included in the global LNG demand.¹⁸⁶

2. European Market Demand Will Bolster Foreign Policy Relations

The current federal policies are inadequate and do not support expanded trade to non-FTA countries, which narrows the potential LNG market.¹⁸⁷ In addition, to the Asian market influence, the United States has the potential to be a leader in the LNG demand to European countries.¹⁸⁸ Currently, the member nations of the European Union are not classified within the free trade countries.¹⁸⁹ As a result, the European Union is dependent on external or foreign sources of energy because it does not possess sufficient indigenous resources to satisfy its energy

for American LNG. Buurma & Hui Hong, *supra* note 173. It is speculated that Asian demand will rise in that region by thirty-six percent by 2020. *Id.*

¹⁸⁴ See Sakmar, *supra* note 98, at 671 (explaining how India is expected to increase the global energy demand by 2035, accounting for eighteen percent of the rise).

¹⁸⁵ See *Bill Introduced in US Congress to Expedite Export of LNG to Allies Like India, Japan*, THE TIMES OF INDIA (Mar. 8, 2014), <http://timesofindia.indiatimes.com/world/us/Bill-introduced-in-US-Congress-to-expedite-export-of-LNG-to-allies-like-India-Japan/article-show/31663817.cms> [<http://perma.cc/4BZ8-DZTV>] (explaining the benefits in legislative reform to expedite exports of natural gas to American allies). "Passing this legislation sends the clear signal that America intends to take full advantage of our energy resources, developing them not only for our own use, but to ensure the lifeline of US gas supplies will be available to our allies[.]" *Id.*

¹⁸⁶ See *supra* notes 182–85 (detailing Asian market demand for American LNG).

¹⁸⁷ See *supra* Part III.A (detailing how the LNG export policies restrict trade and impede on potential new markets for natural gas).

¹⁸⁸ See Coral Davenport & Steven Erlanger, *U.S. Hopes Boom in Natural Gas Can Curb Putin*, N.Y. TIMES (March 5, 2014), <http://www.nytimes.com/2014/03/06/world/europe/us-seeks-to-reduce-ukraines-reliance-on-russia-for-natural-gas.html?module=Search&mabReward=relbias%3Aw> [<http://perma.cc/RQR8-CTQP>] (explaining how the Obama Administration has used natural gas as a weapon to undercut Vladimir Putin's influence over Ukraine and Europe).

¹⁸⁹ See 15 U.S.C. § 717b(a) (2012) (providing context for the public interest standard under the NGA).

demand.¹⁹⁰ If the American LNG exporting application procedures expanded to include European nations, then the United States could shift European countries' reliance on Russia for natural gas supply and directly supply LNG to its allies abroad.¹⁹¹ Moreover, American LNG could also compete with Iranian demand to European countries.¹⁹² Therefore, it is imperative that the United States change its review under the public interest standard and allow LNG exports to Europe and to non-FTA countries.¹⁹³

If the application criteria and review process were expedited to expand to non-FTA countries, the increase in exported LNG could displace coal markets before 2030.¹⁹⁴ By expanding LNG exports to new

¹⁹⁰ See Ebinger et al., *supra* note 25 (highlighting that the traditional sources of natural gas used in the European Union are from countries such as Algeria, Russia, and Norway). In Western and Eastern Europe, many countries pay a higher contract price for their imports and consequently are reliant on Russia for energy. *Id.* For example, Europe receives approximately thirty-one percent of its natural gas from Russia and this reliance could be problematic in the future. Duncan, *supra* note 28, at 620.

¹⁹¹ See Timothy Cama, *Report: Natural Gas Exports Could Hurt Russian State-Owned Company*, THE HILL (Sep. 22, 2014, 4:30 PM), <http://thehill.com/policy/energy-environment/218534-report-natural-gas-exports-could-hurt-russian-state-owned-company> [<http://perma.cc/Z3NS-MM9T>] (speculating on the impact that American LNG could have on Russian demand for LNG); Davenport & Erlanger, *supra* note 188 (explaining how the United States is incentivized to use American natural gas as a lever against Russia to undercut supplies to counter conflicts in Crimea). Increasing exports of LNG from the United States could reduce revenue at Russia's state-owned gas company by eighteen percent, according to a new report. Cama, *supra* note 191. Currently, Russia has dominated European energy policy. Kim Talus, *Access to Gas Markets: A Comparative Study on Access to LNG Terminals in the European Union and the United States*, 31 HOUS. J. INT'L L. 343, 361 (2009). "From the U.S. perspective such Russian influence in the affairs of these democratic nations is an impediment to efforts at political and economic reform." Charles K. Ebinger, *The Department of Energy's Strategy for Exporting Liquefied Natural Gas*, BROOKINGS (Mar. 19, 2013), <http://www.brookings.edu/research/testimony/2013/03/19-liquefied-natural-gas-ebinger> [<http://perma.cc/L6XV-B5VB>]. While the United States' increase in LNG exports could increase its bargaining position in Europe, opponents argue that Russia will remain Europe's dominant gas supplier for the foreseeable future. SIPA Center on General Energy Policy, *U.S. LNG Exports*, COLUM. UNIV., <http://energypolicy.columbia.edu/us-lng-exports> [<http://perma.cc/LRZ9-S4BV>]. Moreover, it is predicted that due to Russia's ability to remain cost-competitive in the region and the fact that U.S. LNG will displace other high-cost sources of natural gas supply, ultimately American LNG will not increase its bargaining position. *Id.* Furthermore, it is speculated that while the impact of American LNG could help European nations, it will not be significant enough to prompt a change in Moscow's foreign policy or have a significant economic impact on the state. *Id.*

¹⁹² See Harmon, *supra* note 57, at 629 (explaining the market for natural gas).

¹⁹³ See *supra* Part III.B (analyzing the foreign policy benefits from expanded LNG to international markets).

¹⁹⁴ See Sakmar, *supra* note 98, at 676 (stating how natural gas is quickly growing). By 2035, natural gas consumption would displace coal markets. *Id.* Natural gas, unlike oil, does not have a global market, only a regional market; thus, "global foreign disruptions in natural gas

international markets, modifying the NEPA review standard, and creating an independent agency similar to the MARAD, American LNG exports can help energy depleted markets and create a cleaner global power generation market.¹⁹⁵ Thus, the DOE and the FERC should act quickly to seize the window of opportunity in the international market by creating a new export policy change that could increase the "liquidity in global LNG markets" and could "produce[] greater geopolitical security for many nations who rely on the import of LNG for a significant portion of their energy supply."¹⁹⁶

C. *Varying Perspectives to Expanded American LNG Export Policies*

Despite the potential international market demand from increased American exportation of LNG, opponents argue that the NGA's LNG export policies should not be changed.¹⁹⁷ Particularly, these opponents argue that expanding LNG export policies will be harmful for many reasons.¹⁹⁸ This section presents the arguments of both opponents and

markets have had limited impact on the U.S. natural gas market." Harmon, *supra* note 57, at 629.

¹⁹⁵ See *infra* Part IV (recommending a statute to modify the existing LNG policy).

¹⁹⁶ Duncan, *supra* note 28, at 621. See Diane Cardwell & Clifford Krauss, *Trucking Industry Is Set to Expand Its Use of Natural Gas*, N.Y. TIMES (Apr. 22, 2013), <http://www.nytimes.com/2013/04/23/business/energy-environment/natural-gas-use-in-long-haul-trucks-expected-to-rise.html?pagewanted=all&module=Search&mabReward=relbias%3Aw&r=0> [<http://perma.cc/6W3B-6PMP>] (explaining the insulation that LNG can provide from the "volatile geopolitics that can drive up petroleum prices"); *Testimony of Martin J. Durbin, President and CEO, America's Natural Gas Alliance*, *supra* note 133 (elaborating on the export LNG demand).

¹⁹⁷ See *infra* Part III.C (examining opposing viewpoints to expanded LNG trade). See also Paul N. Cicio, *ICEA Opposes H.R. 351, the "LNG Permitting Certainty and Transparency Act,"* INDUSTRIAL ENERGY CONSUMERS OF AM. (Jan. 26, 2015), http://www.ieca-us.com/wp-content/uploads/01.26.15_HR-351-Opposition-Letter.pdf [<http://perma.cc/U6WG-LSZB>] (arguing against a shorter review process because the NGA was created to monitor "the cost impact of LNG exports to the U.S. economy and consumers, and its implications to trade" and monitor the long term implications of LNG exports); Jason Kowalski et al., *H.R. 351 LNG Export Letter* (Jan. 26, 2015), http://libcloud.s3.amazonaws.com/93/a9/f/5140/2015_01_26_HR351_LNG_Export_Letter.pdf [<http://perma.cc/DX6V-SJAL>] (vocalizing oppositional support against H.R. 351, the LNG Permitting Certainty and Transparency Act, because it would expedite its decision making without fully analyzing the environmental risks); Frank Pallone, Jr., *Oppose H.R. 351, the LNG Permitting Certainty and Transparency Act*, COMM. ON ENERGY AND COMMERCE, <http://democrats.energycommerce.house.gov/sites/default/files/documents/Dear-Colleague-Oppose-HR-351-2015-1-27.pdf> [<http://perma.cc/AEU3-4ZXJ>] (explaining the opposition to the 2015 H.R. LNG Permitting Certainty and Transparency Act because of the disruptive process of the DOE's approval process for LNG and the failed evaluative impacts that it will have on consumers and manufactures because of the short circuit the DOE's review and the arbitrary deadline standard).

¹⁹⁸ See *infra* Part III.C (listing the arguments opponents to LNG suggest).

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supporters of expanding LNG exportation and ultimately concludes that the domestic economic benefits outweigh the oppositional arguments.¹⁹⁹ Part III.C.1 evaluates the arguments of the impact of LNG exports and domestic prices.²⁰⁰ Next, Part III.C.2 analyzes the impacts that LNG has on the environment and LNG energy safety, security, and independence.²⁰¹

1. Increased LNG Exports Will Grow Domestic Production

Some consumer groups and manufacturers oppose expanded LNG export policies, arguing that it could increase domestic prices and manufacturing costs.²⁰² Typically, proponents of export restriction are often industrial natural gas users who favor export restriction because they “artificially depress LNG prices” and “enable industrial consumers to enhance financial gains by cutting costs and increasing profit margins.”²⁰³ These critics of export restriction fail to acknowledge how a change in review procedures could permit natural gas to become a “bridge fuel” to displacing coal and oil markets.²⁰⁴

On the other hand, supporters of increased LNG indicate that despite an increase in domestic prices, there are many positive economic benefits

¹⁹⁹ See *infra* Part III.C (providing viewpoints to LNG export policies).

²⁰⁰ See *infra* Part III.C.1 (analyzing the arguments on domestic prices due to increased LNG exportation).

²⁰¹ See *infra* Part III.C.2 (evaluating the impact of LNG on the environment and the safety risks that LNG poses).

²⁰² See Daly, *supra* note 143 (discussing the positive and negative benefits of expanded drilling); Natural Resources Committee Democrats, *Drill Here Sell There Pay More*, http://democrats.naturalresources.house.gov/sites/democrats.naturalresources.house.gov/files/2012-03-01_RPT_NGReport.pdfw [<http://perma.cc/3P4W-LUN5>] (providing an opinion of why Democrats oppose additional export permits). “Keeping American natural gas resources in America and keeping prices low will support a more diversified domestic economy and provide greater domestic job benefits than pursuing an export strategy.” Natural Resources Committee Democrats, *supra* note 202. Opponents to expanded LNG argue that if natural gas continues to be in demand for multiple energy purposes, prices would exponentially raise. Cardwell & Krauss, *supra* note 196. Moreover, “[i]f the market export opens up by affecting the volume of exports, then the supply of gas available will decline to meet the rising demand, which ultimately increases prices.” Kennedy, *supra* note 46, at 131.

²⁰³ Kennedy, *supra* note 46, at 131. The EIA indicated, “higher export levels would lead to higher prices, rapid increase in exports would lead to sharp price increases, and slower increases would lead to slower but more lasting price increases.” Sakmar, *supra* note 51 (internal quotations omitted).

²⁰⁴ See Sakmar, *supra* note 98, at 665 (“The ‘bridge fuel’ . . . acknowledges that the abundance of natural gas, particularly U.S. shale gas, creates an opportunity to utilize more natural gas . . .”).

from changed LNG policy restrictions.²⁰⁵ As mentioned above, the increase of LNG exports to allies will provide the United States greater political influence in dictating energy dynamics abroad.²⁰⁶ For example, shipping LNG to markets that are outside of the free trade agreements would bolster the American economy, foreign commodities markets, and reduce dependence on non-stable countries.²⁰⁷ Moreover, the creation of LNG export terminals would have an overwhelmingly positive impact on the domestic economy.²⁰⁸ For example, the construction of new LNG terminals will create new employment opportunities for area citizens.²⁰⁹

²⁰⁵ See Notice, 77 Fed. Reg. 73628 (Dec. 11, 2012) (weighing the factors such as levels of exports global market conditions, and the costs of producing natural gas in the United States, relatively normal conditions to stress cases with high costs of producing natural gas in the US and the large demand in LNG world markets). A study by the ICF International found that LNG exports will contribute up to 665,000 net job gains nationwide and up to \$115 billion net gross domestic product to the United States economy by 2035. Harry Vitas et al., *U.S. LNG Exports: State-Level Impacts on Energy Markets and The Economy*, ICF INT'L (Nov. 13, 2013), <http://www.api.org/~media/Files/Policy/LNG-Exports/API-State-Level-LNG-Export-Report-by-ICF.pdf> [<http://perma.cc/7V8P-7PPM>]. Also, it is projected that LNG exports can generate up to \$74 billion to America's gross domestic product by 2035. Sens. John Barrasso & Martin Heinrich, *LNG Exports Can Power America's Economic Recovery*, ROLL CALL (Feb. 23, 2015, 5:19 PM), http://www.rollcall.com/news/lng_exports_can_power_americas_economic_recovery_commentary-240250-1.html [<http://perma.cc/2WHQ-GLDE>].

²⁰⁶ See *supra* Part III.B (analyzing the demand for LNG globally and its benefits).

²⁰⁷ See *Liquefied Natural Gas (LNG)*, *supra* note 32 (explaining the viewpoints of proponents to LNG exportation). According to the AGA, many investors support increased importation of natural gas to alleviate high gas prices. *Id.* These viewpoints can be applied to exporting of LNG because it can have a positive impact on the global marketplace because there will be a greater supply in diminished markets. *Id.*

²⁰⁸ See Notice, 77 Fed. Reg. 73628 (Dec. 11, 2012) (describing the net positive benefits from increased exports). The benefits that come from export expansion outweigh any loss of capital and wage income to U.S. consumers despite higher domestic natural gas prices. Freeport LNG Expansion, L.P., DOE/FE Order No. 3282 at 40 (May 17, 2013). These net benefits would be possible if the United States produced gas from shale at a low cost, if overall demand increases, and if regional natural gas is imitated which requires increased American production. *Id.* The domestic natural price would increase only if the United States were to export LNG, but this all hinges on the comparative prices of other supplies. *Id.* The projected cost of exporting LNG could range from zero to \$0.33 (2010\$/Mcf) or \$0.22 to \$1.11 (2010 \$/Mcf) depending on growing exports and under conditions of ample U.S. natural gas supply, lower domestic natural gas prices, and other relative facts. *Id.*

²⁰⁹ See Keating, *supra* note 1 (predicting the increase in jobs from expanded LNG exports); Kransdorf, *supra* note 26, at 81–82 (discussing the regional concerns to the creation of an LNG export facility for coastal cities). The export of LNG will also produce significant domestic economic benefits and might even help to reduce the national deficit. Duncan, *supra* note 28, at 621. Job growth creation from LNG exports could create an estimate of "25,000 jobs up-front, with an additional 40,000 created downstream from the gathering, processing, and transportation of the gas[.]" *Id.* at 625. A report from the United States Energy Information Administration indicated the "the U.S. was projected to gain net economic benefits from allowing LNG exports." *Id.* at 624. "We know jobs are created when we build export

However, these positive impacts on domestic economies can only be achieved by removing the discretionary public interest standard from the DOE and speeding up the review process of export applications.²¹⁰

While opponents primarily argue that export terminals are costly and will not lead to greater exportation, proponents argue that using existing terminals will help the domestic economy.²¹¹ One suggestion is to use existing coastal import facilities and transition the terminals into export facilities.²¹² Another suggestion would be to use the new technological processing methods to lower service costs, which will provide other benefits such as the ability to locate the facilities at more advantageous sites.²¹³ A final suggestion would be to use existing facilities to re-export the LNG that is imported to the United States and sell it to international markets.²¹⁴ Overall, the suggestions of transitioning LNG import facilities to LNG export facilities would increase LNG exports and domestic production.²¹⁵

facilities, but we also know . . . that using natural gas to increase American manufacturing output is twice as valuable to the overall economy and creates eight times more jobs than exporting,' said Sen. Debbie Stabenow (D-Mich.)." Timothy Cama, *Obama Administration "Can Comply" with Natural Gas Export Bill*, THE HILL (Jan. 29, 2015), <http://thehill.com/policy/energy-environment/231145-obama-administration-can-comply-with-natural-gas-export-bill> [<http://perma.cc/6RZ6-BSR9>].

²¹⁰ See Daly, *supra* note 143 (detailing how the prospect of a major expansion of U.S. gas exports has tantalized business groups and lawmakers from both parties in arguing for a faster approval process for the LNG export projects as a way to create thousands of jobs and spur economic growth); Goldberg, *supra* note 168 (detailing how bipartisan U.S. Senators are pushing the Secretary of Energy to increase the application process to export liquefied natural gas because the current policy is hurting the United States' ability to compete with other LNG exporting nations).

²¹¹ See Russell, *supra* note 4, at 63 (explaining the costs for a LNG importation facility). The costs for a LNG facility range from \$166.4 million to \$900 million. *Id.* Moreover, the manufacturing of LNG tankers costs about \$150 to \$160 million. *Id.* "The United States currently only ships LNG overseas through re-exports of imported LNG from the Freeport terminal in Texas, and the Sabine Pass and Cameron terminals in Louisiana." *Project Sponsors Are Seeking Federal Approval to Export Domestic Natural Gas*, *supra* note 170. "In 2011, LNG re-exports totaled about 53 billion cubic feet (Bcf), up from about 33 Bcf in 2010[.]" *Id.*

²¹² See Dixon, *supra* note 78, at 31 (explaining the economic advantages of re-exporting based on international demand for gas and the overabundance of unused storage at LNG terminal facilities). Re-exporting is beneficial because less costs will be incurred in erecting new export facilities, rather the economic benefits would be solely from the exportation of the LNG. *Id.*

²¹³ See Knowles, *supra* note 55, at 303 (analyzing the costs of LNG processing methods).

²¹⁴ See Dixon, *supra* note 78, at 31 ("The economic advantage of exporting and re-exporting LNG comes from international demand for gas, the price of domestic gas, and the open capacity at most U.S. LNG ports and terminals.").

²¹⁵ See Knowles, *supra* note 55, at 303 (providing how the lowering of costs for terminal development would enable lower production costs and allow for more exportation).

2. Relative to Other Fossil Fuels, LNG is Less Harmful to the Environment

Despite changes to LNG export policies, environmentalist groups fundamentally oppose the increased exportation process because of the potential environmental harm due to increased drilling.²¹⁶ For example, environmentalists argue that the four part value chain to LNG production is not a part of the ordinary natural gas cycle.²¹⁷ Moreover, these groups contend that relative to other fossil fuels such as coal or oil, LNG still leaves a significant carbon footprint.²¹⁸ Additionally, environmentalists reason that aside from direct fish, mammal, and water quality effects, port terminals and infrastructure issues can permanently alter seafloor habitats.²¹⁹ Furthermore, opponents to LNG argue that the creation of LNG terminals create substantial safety risks.²²⁰

²¹⁶ See Daly, *supra* note 143 ("Exporting natural gas will have serious implications for public health, the environment and climate change[.] . . . Building these terminals means lots of new fracking, and more fracking means more risks for Americans."). "LNG also has tremendous greenhouse gas impacts, because of domestic gas infrastructure's leakage of methane and because of the additional emissions from liquefaction and shipping." Kowalski et al., *supra* note 197.

²¹⁷ See Lute, *supra* note 32, at 649 (stating that while natural gas is cleaner than other fossil fuels, some of the benefits of natural gas are lost through LNG as a result of inefficiency).

²¹⁸ See Daly, *supra* note 143 (arguing that while natural gas production has increased, the implications to the increased drilling will have economic, health, and environmental impacts).

²¹⁹ See Dixon, *supra* note 78, at 21 (explaining how exports of LNG can pose as toxic implications on the environment). For instance, in creating a LNG terminal, rivers may be dredged and fish habitats may be destroyed. Lute, *supra* note 32, at 649. Additionally, LNG tankers anchors in ports damage both marine animals and underwater communities. Dixon, *supra* note 78, at 21-22. "When LNG tankers arrive at a deepwater port and moor to the facility's pipeline connections, their anchor chains drag across the seafloor repeatedly." *Id.* "[T]he USCG found that this 'scouring' impacted an area up to thirty-eight acres per vessel, resulting in 'long-term reduction to benthic productivity.'" *Id.* at 22.

²²⁰ See Russell, *supra* note 4, at 71 (explaining the public health and environmental risks of LNG). The three characteristics of LNG that opponents argue that are dangerous include: its cryogenic temperature, flammable nature, and its vapor dispersion. *Id.* First, opponents argue its cryogenic temperature is dangerous to those who come into contact with the liquid if a spill occurs. Lute, *supra* note 32, at 650. Second, opponents argue that the consequences or hazards from an LNG spill include a wide range of potential events: asphyxiation, cryogenic burns and structural damage, combustion and thermal damage, LNG fireballs, LNG air explosions, and rapid phase transitions. Hightower et al., *supra* note 171, at 37-39. Additionally, opponents to LNG terminals often argue that pool fires and flammable vapor clouds could lead to a combustible disaster. Hollis, *supra* note 32, at 23. These pool fires are deemed problematic because the fires can burn on water, and burn faster and hotter than either oil or gasoline, and its "thermal radiation may injure people and damage property a considerable distance from the fire itself." Dixon, *supra* note 78, at 17. Third, opponents, primarily coastal states, fear that if LNG tankers are located near population centers, that the tankers are susceptible to terrorist attacks. Kransdorf, *supra* note 26, at 46. Due to the size of

While environmentalists' opinions of the long-term effects on the marine environment are valid, LNG has positive environmental benefits.²²¹ Relative to coal, oil, and nuclear sources of energy, LNG presents less concern for global climate change and is less of a risk or threat to public health and safety.²²² Moreover, LNG can reduce dependence on harsh fossil fuels like coal and oil and provide for an alternative power source for the industry sector.²²³ Furthermore, if LNG exports were to increase, supporters would indicate how there are few reported safety incidents.²²⁴ In fact, over the past twenty-five years, there

oil tankers and the proximity of sea lands, confined areas such as straits, harbors, and rivers are the most vulnerable to terrorist attacks. *Id.* at 47. Moreover coastal states argue that in the event of a mass catastrophe that state funds would pay. *Id.* at 82. Furthermore, coastal states argue that LNG tankers will negatively impact the states revenue of those who tour their coastlines. *Id.*

²²¹ See Charles Ebinger et al., *Liquid Markets: Assessing the Case for U.S. Exports of Liquefied Natural Gas*, BROOKINGS (May 2012), http://www.brookings.edu/~media/research/files/papers/2012/1/natural%20gas%20ebinger/natural_gas_ebinger.pdf [<http://perma.cc/2NDY-YA4H>] (explaining the international environmental implications of LNG). “[N]atural gas in general has the potential to reduce carbon dioxide emissions by 740 million tonnes in 2035, nearly half of which could be achieved by the displacement of coal[.]” *Id.* at 44. “Burning natural gas causes more short-term warming, but the shorter life of methane (9-15 years) over carbon dioxide (50-200 years) in the atmosphere makes natural gas a cleaner alternative in the long-term.” David K. String, *A Fracking Good Solution to the Hydraulic Fracturing Regulation Conundrum*, 48 VAL. U. L. REV. 417, 427 (2013). Moreover, LNG may be used as a possible vehicle replacement instead of oil. Ebinger et al., *supra* note 221, at 44.

²²² See Russell, *supra* note 4, at 60 (explaining the benefits of LNG relative to other energy sources). In the event of a LNG leak or a spill during the transportation of LNG, a LNG spill is less of an environmental concern than an oil spill. Kransdorf, *supra* note 26, at 45. In its liquid state, natural gas is not flammable or explosive because it is not stored under pressure. *Id.* “Although a large amount of energy is stored in LNG, it cannot be released rapidly enough into the open environment to cause the overpressures associated with an explosion. LNG vapors (methane) mixed with air are not explosive in an unconfined environment.” Energy Sources, *supra* note 32. Moreover, in the event of a spill, LNG quickly vaporizes because when exposed to heat sources such as water. *Id.* Only in the right concentration of LNG vapor in the air (5%-15%) and a source of ignition could a LNG fire result. Center for Liquefied Natural Gas, *Safety/Security*, <http://www.lngfacts.org/about-lng/safetysecurity/> [<http://perma.cc/2UQJ-UL5D>]. Thus, environmental cleanup is not required in cases of LNG leaks or spills on bodies of water. Energy Sources, *supra* note 32.

²²³ See Cardwell & Krauss, *supra* note 196 (“Moving into L.N.G. is a means to get us onto what we see as the bridging fuel of the future and off of oil.”). LNG has been considered as an alternative to other power industry sources as companies such as UPS, FedEx, and Ryder System recently announced that they will increase LNG in the trucking industry. *Id.*

²²⁴ See 15 U.S.C. § 717b-1 (2012) (explaining that safety procedures are written within the NGA). For example, in 15 U.S.C. § 717b-1(e), all authorized LNG terminals are required to develop emergency response plans. *Id.* § 717b-1(e). For instance, throughout the transportation of LNG, “[m]ore than 135,000 LNG carrier voyages have taken place without major accidents or safety or security problems, either in port or at sea.” Center for Liquefied Natural Gas, *supra* note 222. “[T]he safety record shows that the LNG industry, while not perfect, has not had a serious accident in the U.S. in over 25 years.” Lute, *supra* note 32, at

have not been reported incidents of LNG fireballs, pool fires, LNG air explosions, or rapid phase transitions.²²⁵

Two recent developments affecting LNG export applications, the August 15, 2014 DOE Order issued in the Federal Register and the 2015 House of Representative LNG Permitting Certainty and Transparency Act failed to solve the current problem.²²⁶ Moreover, the current DOE and FEREC's application requirements for LNG exports have not sufficiently satisfied the demand for American LNG.²²⁷ The recent developments for LNG exports are still inadequate and do not support expanded trade to non-FTA countries, which narrows the potential LNG market and affects the economy.²²⁸ Accordingly, a reformation in the federal law through a new proposed model statute is needed to improve the current procedure around the application criteria for exporting LNG.²²⁹ The impact of the change will allow American LNG to serve international demand, increase trade, and thereby reduce greenhouse emissions from harsh fossil fuels like coal and oil.²³⁰

IV. CONTRIBUTION

The DOE's 2014 proposed changes to the procedures regulating LNG export applicants are not sufficient to satisfy international market demand for American LNG.²³¹ The current exportation policy thwarts the United States economy, the global economy, and the environment from receiving the benefits of increased LNG exports.²³² First, the public interest standard under the NGA is too discretionary in the application approval process.²³³ Second, this evaluative standard and the unfeasible lengthy requirements

652. "Over the life of the industry, eight marine incidents worldwide have resulted in LNG spills, with some damage; but no cargo fires have occurred." Hightower et al., *supra* note 171, at 28.

²²⁵ See Lute, *supra* note 32, at 652 (discussing the safety record of LNG).

²²⁶ See H.R. 351, 114th Cong. (2015) (explaining the introduced bill that seeks to review applications sent to the DOE); Notice, 79 Fed. Reg. 48132 (Aug. 15, 2014) (detailing the DOE new Order).

²²⁷ See *supra* Part III.B (analyzing the new international markets for LNG if there was a change in the export procedure).

²²⁸ See *supra* Part III.A (outlining the problems with the public interest standard and the protracted agency review).

²²⁹ See *infra* Part IV.B (providing commentary on the benefits of the Note's proposed change).

²³⁰ See *supra* Part III (considering the problems with the current policies that regulate natural gas).

²³¹ See *supra* Part II.D (explaining the DOE's proposed policy change).

²³² See *supra* Part III (investigating the problems with current LNG policy).

²³³ See *supra* Part III.A (analyzing the evaluative standard under the NGA).

for LNG applications prolong the approval process.²³⁴ Moreover, the current policy sustains the DOE's discretionary review of applications, and fails to specify a set time period for completed review of LNG applications.²³⁵ Last, because of the rigorous and absolute standards for non-FTA countries and the biased exportation policies, it impedes American LNG demand to new markets within Europe and Asia.²³⁶ Thus, the current LNG export policy failed to meet international demand, increase trade, and reduce greenhouse emissions.²³⁷ To reform this problem, further amendments to the NGA, the DOE, and the FERC procedure are needed to satisfy international market demands for LNG and lower global emissions.²³⁸

Specifically, this Note proposes amendments to the NGA, the DOE, and the FERC procedure in the form of a four-part procedural statute that would revise the problematic sections of the overall LNG export approval process.²³⁹ First, the public interest standard should be amended and limited.²⁴⁰ Second, the export terminals should be monitored by a separate agency similar to the structure of the Maritime Administration created by the MTSA.²⁴¹ Third, the DOE should issue thirty-day decisions based upon review of LNG export applications that have passed the NEPA review.²⁴² Fourth, LNG export applications should be expanded to include non-FTA countries including countries within Europe, Asia, the World Trade Organization, and the North Atlantic Treaty Organization, and not be limited solely to countries with which the United States has free trade agreements.²⁴³ Part IV.A introduces the proposed legislation that will guide the new LNG regulation.²⁴⁴ Then Part IV.B provides commentary on why this amendment is deemed the best option to solving the current problem.²⁴⁵

²³⁴ See *supra* Part II.B-C (detailing how export applicants must comply with the six month pre-filing procedures before submitting a formal application and that overall application review can last at least for two to three years).

²³⁵ See *supra* Part II.C (explaining the administrative agencies export application criteria).

²³⁶ See *supra* Part III.B (detailing the heightened international demand for LNG to new markets and the positive economic benefits).

²³⁷ See *supra* Part III (examining the current problems with LNG regulation).

²³⁸ See *infra* Part IV.A (listing a proposed statute for LNG export applications).

²³⁹ See *infra* Part IV.A-B (presenting the Note's proposed statute for expanding LNG).

²⁴⁰ See *supra* Part II.B.1 (explaining the NGA's public interest standard); see also *supra* Part III.A (addressing the necessity of policy reform).

²⁴¹ See *supra* Part II.B.2 (illustrating the provisions of the MTSA).

²⁴² See *supra* Part II.B.2 (detailing the NEPA review).

²⁴³ See Office of Fossil Energy, *supra* note 57 (listing the FTA countries).

²⁴⁴ See *infra* Part IV.A (giving the "Proposed LNG Legislation").

²⁴⁵ See *infra* Part IV.B (providing a commentary on the "Proposed LNG Legislation").

A. *Proposed LNG Legislation*

The Note's proposed regulatory framework is as follows:

Specifically, Section 1 (15 U.S.C § 717(a)) of the NGA should be amended by striking subparagraph (a) and inserting the following:²⁴⁶

*(a) Public Interest. The public interest standard is defined by Congress as engaging in the business of transporting or selling or importing or exporting natural gas or liquefied natural gas to domestic or foreign commerce markets by focusing solely on three factors: domestic supply, international demand, and the impact of trade on international relations.*²⁴⁷

Additionally, the Note proposes amendments to the regulatory framework of the DOE and the FERC as follows:

*(b) Expedited Thirty Day Review. The Department of Energy shall render decisions within thirty (30) days if National Environment Policy Act review is completed and an application has met the Department of Energy specification set forth below.*²⁴⁸

1. *As defined in 10 C.F.R. § 590.202, the DOE application for LNG exports mandates the following elements:*

(A) NEPA pre-filing where an Economic Assessment and Economic Impact Statement is reviewed by the Federal Energy Regulatory Commission; and

(B) The applicant should identify a long term or short term LNG contracts; and

(C) The project and scope; and

*(D) The projected costs and targeted market of trade.*²⁴⁹

2. *If an applicant has not met b(1) (A)–(D) then an application for LNG export is denied. An applicant must resubmit the application and the Department of Energy will not issue a conditional approval. If an application has*

²⁴⁶ This part of the suggested statute is based on the provisions of 15 U.S.C. § 717(a) (2012), which defines the public interest standard.

²⁴⁷ See *supra* note 51 (stating how the Commission defines the current public interest standard).

²⁴⁸ This part of the suggested regulatory framework is based on the review procedure imposed by the NEPA and the DOE. While the August 15, 2015, Order proposed to expedite export applications, a set timeline was not established. See Notice, 79 Fed. Reg. 48132 (Aug. 15, 2014).

²⁴⁹ See *supra* Part II.B.2 (outlining the NEPA review standards required before filing an LNG application with the FERC).

met the requirements set by b(1) (A)–(D) then a decision shall be rendered in thirty (30) days.

(c) Export Terminals Monitored by Separate Agency. LNG offshore or coastal export terminals created solely for liquefied natural gas are required to be monitored by an independent agency created by Congress under the purview of the Department of Energy. The Department of Energy or Federal Energy Regulatory Commission will not provide direct oversight after the terminal has been approved through the Federal Register process. LNG export terminals will be regulated by a separate lead agency, similar to the Federal Energy Regulatory Commission structure, after formal review and created by the Department of Energy that will be focused solely on LNG applications.

(d) Expanding to new countries. LNG exports shall not be limited to only countries where the United States has a free trade agreement. LNG exports shall be expanded to countries within the European Union, Asia, and countries that are members of the World Trade Organization, and the North Atlantic Treaty Organization. While trade shall be expanded to these four sets of trade categories, exports shall be restricted to those countries that qualify based on the public interest standard defined by subsection (a).²⁵⁰

B. Commentary

While the NGA created the regulatory framework for natural gas transmission, the DOE's and FERC's enforcement of the NEPA and the EPAct creates an overall lengthy process for LNG export applications.²⁵¹ Overall, the DOE's policy toward American LNG exportation is too restrictive.²⁵² As seen by the amendments to statutes such as the DPA, the MTSA, the NGA, and the EPAct, more policy changes toward LNG exportation are needed.²⁵³ Although the DOE's recent 2014 Order stopped the granting of conditional decisions and issuing final determinations after the FERC's NEPA environmental review, this policy change is not adequate because of the discretionary procedures and excessive

²⁵⁰ The proposed amendments are italicized and are the contribution and original work of the author.

²⁵¹ See *supra* Part III (explaining why the enforcement of LNG regulation is problematic).

²⁵² See *supra* Part III (analyzing the potential flaws of the current review process under the NGA and the agencies' implementations of the five statutes mentioned in Part II).

²⁵³ See *supra* Part II.B (defining the federal legislation related to LNG exports).

permitting processing requirements.²⁵⁴ This Note's four-part proposal of amendments and additions to existing statutes and regulations are the best solutions because it will maintain the status quo of the underlying policies towards natural gas exportation while also increasing trade, boosting the economy, and promoting a cleaner global environment.²⁵⁵

Part A of the amended statute will replace the current public interest standard review under Section 1, 15 U.S.C. § 717(a).²⁵⁶ Revising the public interest standard to a defined and narrower standard of review is imperative as the current policy and legal requirements differ depending on the country receiving the LNG export.²⁵⁷ Instead of the NGA's undefined public interest standard and the totality of the circumstances standard's ambiguous list of factors, the DOE should apply a limited three factor test including the review of the domestic natural gas supply, the international demand for the natural gas, and the impact on trading natural gas on international relations, are examined in the application.²⁵⁸

Part B of the four-part proposal to the regulatory framework of the DOE and FERC will be integrated into the DOE's and FERC's existing review process, mandating DOE decisions within thirty days.²⁵⁹ The DOE's lack of a time constraint on or after the FERC's NEPA review prolongs the overall LNG siting process.²⁶⁰ The current review can last for numerous years because the policy imposes discretionary standards on the DOE as seen by the lack of a deadline to review the pending LNG applications.²⁶¹ The proposed four-part procedure would direct the DOE to issue a decision on LNG applications for exportation following NEPA review and a formal application of all of these factors.²⁶²

Part C of the four-part proposal of amendments to the regulatory framework of the DOE and FERC suggests the creation of a separate independent agency similar to that of the MARAD where an independent

²⁵⁴ See Notice, 79 Fed. Reg. 48132 (Aug. 15, 2014) (detailing the revisions to LNG applications).

²⁵⁵ See *supra* Part IV.A (providing the Note's "Proposed LNG Legislation").

²⁵⁶ See *supra* Part II.B.1 (highlighting the public interest standard Section 1, 15 U.S.C. § 717(a)).

²⁵⁷ See *supra* Part III.A (discussing the public interest standard and the multiple factors to determine an export to a free trade country and a non-FTA country).

²⁵⁸ See Bennett, *supra* note 94 (listing the ambiguous list of factors to determine the public interest standard).

²⁵⁹ See *supra* Part II.D (elaborating on the current status of LNG policy and application criteria); *supra* note 129 (stating how congressional bills H.R. 351, 115th Cong. (2015) and S. 33, 115th Cong. (2015) addressed a similar idea for reforming existing application review).

²⁶⁰ See *supra* Part III.A (analyzing the lengthy review process for applicants); *supra* note 166 (detailing the numerous applications currently pending).

²⁶¹ See *supra* Part III.A (discussing how current procedure is discretionary and time consuming).

²⁶² See *supra* Part IV.A (detailing the "Proposed LNG Regulation").

agency would monitor LNG exports.²⁶³ Under the current policy, the FERC has exclusive authority over the siting and construction of export and import terminals of LNG.²⁶⁴ Under the Note's proposed procedure, there should be a separate agency, mirroring the MARAD's structure, to monitor the security, safety, and environmental impacts of only LNG export terminals.²⁶⁵ This agency should be created by Congress and given independent status similar to the agency status of that of the FERC.²⁶⁶ Thus, if the current jurisdiction is transferred to a different independent agency to regulate LNG export terminals, then the approval process for terminal development would be shortened because the DOE and FERC would not have to monitor the export terminals post approval of final notice.

Last, Part D of the four-part proposal of amendments to the DOE and FERC regulatory framework would expand the current export policy to include non-FTA countries.²⁶⁷ The DOE's policy of granting LNG exportation to countries that only have free trade agreements has hindered the global economy and prevented the receipt of the environmental benefits.²⁶⁸ The current policy of the DOE is limited in that it does not permit LNG exportation to European and Asian countries where there are no diplomatic ties.²⁶⁹ This Note's proposal would require that LNG export applications be expanded to include non-FTA countries such as countries within Europe, Asia, the World Trade Organization, and the North Atlantic Treaty Organization, and not be limited solely to countries with which the United States has free trade agreements.²⁷⁰

Opponents to the Note's proposed amendment to the NGA and regulatory framework might argue that the Note's contribution further

²⁶³ See *supra* Part II.B.2 (explaining how the MTSAs have an independent agency reviewing terminals).

²⁶⁴ See *supra* Part II.C (explaining the duties of the FERC).

²⁶⁵ See *supra* Part II.B.2 (detailing the review procedures under the MARAD).

²⁶⁶ See *supra* Part II.C (revealing the duties of the FERC).

²⁶⁷ See Office of Fossil Energy, *supra* note 57 (listing the free trade agreement countries). "[T]he United States has FTAs that require national treatment for trade in natural gas with Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea and Singapore." *Id.* "Panama is the most recent country with which the United States has entered into a FTA that requires national treatment for trade in natural gas, effective October 31, 2012." *Id.* "Not all countries that have a FTA with the United States require national treatment for trade in natural gas (i.e. Costa Rica and Israel)." *Id.*

²⁶⁸ See *supra* Part III.B (discussing the benefits of expanded trade to Asian and European markets).

²⁶⁹ See *supra* Part III.B (analyzing the potential international demand from increased trade).

²⁷⁰ See Office of Fossil Energy, *supra* note 57 (listing the free trade agreement countries).

complicates the review process of LNG exports under the NGA.²⁷¹ For example, opponents might argue that the procedural changes in the public interest standard is too profit driven and geared more towards international trade and less cognizant of the long term effects on geopolitics or the American economy.²⁷² Additionally, opponents might argue that the public interest standard is too narrow and fails to consider vital factors such as energy security and cumulative impact of prior authorizations.²⁷³ Further, opponents may argue that the thirty day review after a NEPA review is completed, might fail to provide an adequate or systematic or detailed review of application or potential environmental hazards or undercut the review mechanisms established by the public interest standard.²⁷⁴ Last, the expansion of exports to non-FTA countries, the European Union, member nations of the World Trade Organization, and member nations of the North Atlantic Treaty Organization might impact international relations or other foreign policy agreements.

The current restrictions and delays of LNG export applications due to the application criteria are problematic.²⁷⁵ However, opponents' arguments are too narrow and fail to realize the positive global energy markets implications that can help millions of consumers. Due to the numerous pending LNG export applications and statistics of the potential economic growth, the Note's four-part reformation of the LNG export policy should help to increase the approval of LNG applications while reducing greenhouse gas and improving the economy.²⁷⁶ Although there will be continued push and pull from opponents, members of Congress, environmentalist groups, and industrialists, this increased LNG exportation could lessen the production of overall greenhouse gases by

²⁷¹ See Pallone, Jr., *supra* note 197 (providing oppositional viewpoints to expansion of LNG exports).

²⁷² See *id.* (investigating the disruptive process of a change in the DOE policy for LNG exports).

²⁷³ See *id.* (arguing the negative impacts of expanded LNG trade on the economy); Kowalski et al., *supra* note 197 (vocalizing opposition to economic and international impacts).

²⁷⁴ See Cicio, *supra* note 197 (contending that a non-extensive review of applications can have long term implications on millions of natural gas consumers); Pallone, Jr., *supra* note 197 (detailing the failed assessment of procedural safeguard review).

²⁷⁵ See *supra* Part III.A (analyzing the current status of LNG regulation and the problems with the application requirements).

²⁷⁶ See Office of Energy Projects, *supra* note 166 (detailing that as of April 14, 2015, the DOE has eighteen export terminals proposed to the FERC proposing to expedite export applications from the lower forty eight states to countries without a free trade agreement with the United States).

advancing clean-burning fossil fuels, boost the U.S. economy, and increase global trade.²⁷⁷

V. CONCLUSION

For over fifty years Congress amended many statutes regulating natural gas transmission. While these laws, such as the NGA, the NEPA, and the DPA, have been amended from time to time, agencies such as the DOE and the FERC have ineffectively enforced the evolving statutory requirements. Thus, more reform is needed. Reflecting back to the newspaper headlines mentioned in the introduction of this Note, such as the unemployment rate, the impact of fossil fuels, and the impact of LNG to lift the U.S. economy, increased exportation of American LNG can serve as a “bridge fuel” to curing market defects and solving the energy demand. However, only through the proposed Note’s reformation of existing laws and procedures and amended statutes can America’s LNG exports increase. Although the two recent federal developments including DOE’s proposed Order and the recent bills introduced by Congress have considered LNG policy changes, this Note suggests that more statutory reform to the NGA’s application criteria for LNG exports is required. By narrowing existing natural gas policy and returning faster decisions on LNG applications, American LNG can serve as a clean and positive energy source for globalized trade.

Sydney Weathersby*

²⁷⁷ See *supra* Part III (analyzing the problem with existing LNG statutes, regulations, and policies and why a change is imperative).

* J.D., Valparaiso University Law School (2016); B.A., History, University of Michigan (2013). I would like to thank my family for their love and encouragement during the Note writing process. I would also like to thank the individuals I consulted to learn about energy and environmental law. Last, I would like to thank my teachers and colleagues for pushing me to achieve my academic potential.