

United States LNG Exports: The Current Legal and Economic Landscape

By: Yousef H. Rahman

Introduction

Over the past seven years, the energy supply paradigm in the United States has shifted dramatically. In 2007, the United States was a net importer of liquefied natural gas (“LNG”) and other fossil fuels. The situation today is in the process of reversal as the US has the potential to be the world’s largest producer of natural gas by 2015^{1, 2} and the world’s largest oil producer by 2020.³ Domestic prices have dropped dramatically due to the increased supply, so oil and gas producers are seeking international markets to sell their natural gas. This internationalization trend has caused a contentious debate among natural gas producers, consumers, administrators and politicians over whether, and how much, LNG should be exported abroad.

The debate has focused on several areas: how the current regulatory framework governing natural gas exports operates; the economic and political benefits and detriments of exporting natural gas; and potential changes to the regulatory regime that would reflect the current domestic energy reality. The surplus has also caused a dramatic increase in applications for permits to the Department of Energy (“DOE”) to export LNG abroad and to the Federal Energy Regulation Committee (“FERC”) to build LNG export terminals. However, the statute empowering the DOE and FERC to regulate natural gas exports, The Natural Gas Act (“NGA”),

¹ Elisabeth Rosenthal, *U.S. to Be World’s Top Oil Producer in 5 Years, Report Says*, N.Y. TIMES (Nov. 12, 2012), <http://www.nytimes.com/2012/11/13/business/energy-environment/report-sees-us-as-top-oil-producer-in-5-years.html>.

² Elisabeth Rosenthal, *U.S. to Be World’s Top Oil Producer in 5 Years, Report Says*, N.Y. TIMES (Nov. 12, 2012), <http://www.nytimes.com/2012/11/13/business/energy-environment/report-sees-us-as-top-oil-producer-in-5-years.html>.

³ Int’l Energy Agency, *World Energy Outlook 2012* 1 (2012).

was first enacted in 1938 and was last amended in 2005. Even though the last modification anticipated the United States as net importer of natural gas, it does not reflect the current energy market. Accordingly, the permit process takes well over a year for authorization to export to non-free trade agreement countries, and several years for authorization to build an LNG export terminal. As a result, there is a significant backlog of permit applications. For that reason, the NGA needs to be amended to streamline the permitting process. This paper covers each of these topics, as well as explains the cause of the glut of natural gas, provides both a history of the legislation enacted to regulate natural gas in the United States and a detailed analysis of the federal regulations employed by DOE and FERC, and provides suggestions to speed up the authorization process.

Beginning in 1970 for dry natural gas, and the mid-1980s for all other forms of natural gas, the proved US reserves began eroding.⁴ In 1986, however, consumption of natural gas rose for the first time in thirteen years and continued to climb to reach record consumption levels in 2012 (the last year for which data is available).⁵ This disparity between domestic supply and demand caused US imports of LNG to rise dramatically from 1986 onward, reaching a record level in 2007.⁶ Domestic natural gas prices also soared during this period, reaching record highs in the early-to-mid 2000s.⁷ This situation caused “energy companies and consultants [to forecast] an increased need for LNG imports.”⁸ As a result, in 2003 the Energy Information

⁴ U.S. Energy Info. Admin., *U.S. Natural Gas Reserves Summary as of Dec. 31*, http://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_a.htm (last updated Jan. 7, 2014).

⁵ U.S. Energy Info. Admin., *U.S. Natural Gas Consumption by End Use*, http://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_a.htm (last updated Jan. 7, 2014).

⁶ U.S. Energy Info. Admin., *U.S. Natural Gas Imports by Country*, http://www.eia.gov/dnav/ng/ng_move_imp_s1_a.htm (last updated Jan. 7, 2014).

⁷ U.S. Energy Info. Admin., *U.S. Natural Gas Prices*, http://www.eia.gov/dnav/ng/ng_pri_sum_dcu_nus_m.htm (last updated Jan. 7, 2014).

⁸ *Liquefied Natural Gas (LNG)* 4 (Nat’l Petroleum Council Paper No. 1-10, 2012).

Administration (“EIA”) reported eighteen proposed LNG import terminals as well as proposed expansions of four existing LNG import terminals.⁹ By 2007, the total number of approved import terminals reached twenty-four, with fourteen more proposed.¹⁰ In 2009, the EIA projected indefinite dependence on imported LNG coupled with escalating prices.¹¹ Meanwhile, the US natural gas industry took notice of the increased domestic demand and dwindling supply. By 2010, the natural gas industry achieved significant breakthroughs in unconventional natural gas extraction (shale, coal bed methane, “tight” gas and deep gas) that the 2009 outlook completely flipped. The EIA projected abundant domestic supplies that would keep domestic prices in check for years to come.¹² In the span of just a year, the US natural gas supply and market shifted drastically.

The improvement of upstream technologies have unlocked and made extractable previously economically prohibitive natural gas reserves. As result, production has soared. Over the course of a single year, the US went from a projected large consumer of imported LNG in 2009 to the world’s fifth highest proved natural gas reserves in 2010.¹³ Domestic gross gas production from shale alone increased 64% from 2008 to 2009 and nearly 300% from 2008 to 2011.¹⁴ The rapid increase in production, coupled with substantial domestic reserves caused

⁹ U.S. Energy Info. Admin., *U.S. LNG Markets and Uses* 7 (2003).

¹⁰ Nat’l Petroleum Council, *supra* note 8, at 6.

¹¹ Michael Levi, The Brookings Institute, *A Strategy for U.S. Natural Gas Exports* 5 (2012).

¹² Levi, *supra* note 11, at 5.

¹³ Europe’s Energy Portal, *Natural Gas Reserves by Country by the End of 2011*, <http://www.energy.eu/stats/energy-natural-gas-reserves.html> (last visited Apr. 10, 2013).

¹⁴ U.S. Energy Info. Admin., *Natural Gas Gross Withdrawals and Production*, http://www.eia.gov/dnav/ng/ng_prod_sum_dc_u_NUS_a.htm (last updated Jan. 7, 2014).

domestic natural gas prices to plummet from \$12.69 MMBtu in June 2008, to as low as \$1.95 MMBtu in April 2012.¹⁵

Overseas, however, the natural gas market was far different from the prices seen domestically over the same period. In Europe, for example, natural gas sold on the spot market for about \$11 MMBtu as of March 2012. In East Asia the price rose above \$15.¹⁶ Thus, there was—and still is—huge potential for domestic producers to make tremendous profit throughout the supply chain by exporting US natural gas to these markets. Despite this potential, US LNG exports have been minimal since unlocking its tremendous reserves. The US exported 1,136,789 MMcf¹⁷ of a total of 26,836,353 MMcf¹⁸ of natural gas production, constituting only about 4% of total production for that year. It is important to note that the majority of these exports were pipeline exports to Mexico and Canada, not LNG exports. The ratio improved marginally in 2011, increasing by 1%,¹⁹ but not for a lack of want within the industry.

There are currently twenty-one pending applications for LNG exports to non-free trade agreement countries currently under DOE review.²⁰ Additionally, five existing LNG import terminals have applications pending with FERC for authorization to add export capabilities and five more applications for permission to build LNG export terminals.²¹ Project sponsors have

¹⁵ U.S. Energy Info. Admin., *Henry Hub Gulf Coast Natural Gas Spot Price*, <http://www.eia.gov/dnav/ng/hist/rngwhhdm.htm> (last updated Jan. 23, 2014).

¹⁶ Levi, *supra* note 11, at 5.

¹⁷ U.S. Energy Info. Admin., *U.S. Natural Gas Exports by Country*, http://www.eia.gov/dnav/ng/ng_move_expc_s1_a.htm (last updated Jan. 7, 2014).

¹⁸ U.S. Energy Info. Admin., *supra* note 13.

¹⁹ U.S. Energy Info. Admin., *supra* note 13.

²⁰ U.S. Department of Energy, *Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States*, available at: http://energy.gov/sites/prod/files/2013/11/f5/Summary%20of%20LNG%20Export%20Applications_0.pdf (*as of November 15, 2013*).

²¹ Federal Energy Regulatory Commission, *North American LNG Import/Export Terminals*, <http://www.ferc.gov/industries/gas/indus-act/lng/LNG-proposed-potential.pdf> (last updated Sep. 12, 2013).

formally identified two existing LNG import terminals, and six new facilities have similarly been identified.²² This demonstrates a tremendous backlog of applications for both permits to build LNG export facilities and permits to export LNG to non-free trade agreement countries. The pace of review has been excruciatingly slow. Out of the nineteen applications filed with the DOE since 2010, only four have been approved for long-term LNG exports to non-free trade agreement countries.²³ The issue, then, is not a lack of industry initiative, but the cumbersome regulatory framework in place that makes it difficult, costly and time-consuming to obtain the capability and authorization necessary to export LNG to non-free trade agreement countries.

I

Statutory Framework

A. The Natural Gas Act of 1934 and Subsequent Amendments

Section 3 of the NGA endows the Commission with the exclusive authority to grant authorization to export natural gas²⁴ and to issue permits to “site, construct, expand or operate an LNG terminal”.²⁵ The Commission, as defined by 15 U.S.C. § 717a, is the now defunct Federal Power Commission (“FPC”). Subsequent to the enactment of the Department of Energy Organization Act (“DOEOA”), the FPC was eliminated and most of its responsibilities and functions were transferred or delegated via the Secretary of Energy to the DOE and its various subdivisions.²⁶ Specifically, the authority and jurisdiction over gas exports transferred to the

²² Federal Energy Regulatory Commission, *supra* note 21.

²³ U.S. Department of Energy, *supra* note 20.

²⁴ Natural Gas Act of 1938 § 1(b), 15 U.S.C. § 717(b).

²⁵ *Id.*

²⁶ Pub. L. No. 95-91, 91 Stat. 565 (1977).

DOE's Office of Fossil Energy's ("OFE") Assistant Secretary for Fossil Energy,²⁷ while the authority and jurisdiction over export terminal siting, construction, expansion and operation was transferred to FERC.²⁸

Any person seeking authorization to export natural gas from the United States or to amend an existing export authorization must file an application with the Office of the Assistant Secretary for Fossil Energy.²⁹ Section 3(a) of the NGA sets forth the standard for review of most LNG export applications:

[N]o person shall export any natural gas from the United States to a foreign country or import natural gas from any foreign country without first having secured an order of the [Secretary of Energy] authorizing it to do so. The [Secretary] shall issue such order upon application, unless after opportunity for hearing, [he] finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by [the Secretary's] order grant such application, in whole or part, with such modification and upon such terms and conditions as the [Secretary] may find necessary or appropriate.³⁰

Thus, Section 3(a) creates a rebuttable presumption that a proposed export of natural gas is in the public interest, and requires DOE to grant an export application unless it finds that the record in the proceeding of the application overcomes that presumption.³¹

²⁷ Chris Smith, Statement to the Senate, Committee on Energy and Natural Resources. *The Department of Energy's Role in Liquefied Natural Gas Export Applications*, Hearing, Nov. 8, 2011, available at: <http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?ID=0e5d5793-4e30-4fcd-a7c3-791c985b302e> (last updated Feb. 12, 2013).

²⁸ Kenneth S. Culotta, Monica Hwang & Matt Salo, *U.S. LNG Export Projects: Regulatory Outlook and Contracting Mechanisms*, 8 TEX. J. OIL GAS & ENERGY L. 61, 67 (2012-13).

²⁹ 10 C.F.R. § 590.201.

³⁰ Smith, *supra* note 27, at 2.

³¹ *Id.*

B. The Distinction Between Free Trade and Non-Free Trade Countries

1. The Energy Policy Act of 1992

The Energy Policy Act of 1992 introduced a new Section 3(c) to the NGA, creating a different standard of review for applications to export natural gas to those countries that the United States has a free trade agreement (“FTA”) requiring the national treatment for trade in natural gas. Section 3(c) requires such FTA applications to be deemed to be consistent with the public interest, and requires such applications to be granted without modification or delay.³² Thus, the application process, in practice, is much different for FTA and non-FTA countries.

2. Free Trade Agreement Applications vs. Non-Free Trade Agreement Applications

FTAs are crafted to encourage trade between the signatory countries. If the United States has an FTA that provides for national treatment of natural gas, the application to export to such a country is automatically deemed consistent with the public interest and is usually granted in short order. For example, Jordan Cove Energy Project, L.P. filed an application to export to non-FTA countries on March 23, 2012 and the application is still pending, while Magnolia LNG, LLC filed an application to export to FTA countries on December 18, 2012 and was approved on February 26, 2013.³³ The reason for the difference in processing time is because the DOE has concluded “without delay or modification overrides regulatory requirements for public notice and other hearing-type procedures in 10 C.F.R. § 590.”³⁴ Therefore, without the extensive public

³² *Id.*

³³ Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States (Apr. 2, 2013), available at: http://fossil.energy.gov/programs/gasregulation/reports/summary_lng_applications.pdf (last accessed Jan. 20, 2014).

³⁴ Freeport LNG Expansion, L.P., DOE/FE Order No. 2913 (Feb. 10, 2011), http://www.fossil.energy.gov/programs/gasregulation/authorizations/Orders_Issued_2011/ord2913.pdf.

policy analysis and opportunity for public comment and hearing, natural gas export applications are approved more quickly.

3. The Practical Effect of the Distinction

The problem, however, for these types of applications is not the time it takes to process them, but the natural gas demand of the countries that the United States has a FTA with national treatment of natural gas. Those countries are Australia, Bahrain, Canada, Chile, Columbia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea, and Singapore.³⁵ Among these countries, only the Republic of Korea, Canada, Chile, Mexico, and the Dominican Republic have LNG import terminals.³⁶ And of those countries, Chile, Mexico, Canada, the Dominican Republic, and the Republic of Korea import significant amounts of natural gas.³⁷

Further narrowing the FTA importing countries is the fact that Mexico and the Dominican Republic link their natural gas prices to the Henry Hub and New York Mercantile Exchange (“NYMEX”) respectively, thus paying very similar if not identical prices as actors in the United States market. Canada’s natural gas prices are very close to, if not cheaper than, United States’ prices. For example, on March 19, 2012 the Canadian price 3.36 USD/MMBtu,³⁸ whereas the Henry Hub price for the same day was 3.96 USD/MMBtu.³⁹ That leaves only the

³⁵ Global LNG Info, *World’s LNG Liquefaction Plants and Regasification Terminals*, <http://www.globallnginfo.com/World%20LNG%20Plants%20&%20Terminals.pdf> (Jan. 2013).

³⁶ U.S. Dept. of Energy, *DOE – Fossil Energy: How to Apply*, http://www.fossil.energy.gov/programs/gasregulation/How_to_Obtain_Authorization_to_Import_an.html (last accessed Apr. 26, 2013).

³⁷ Int’l Gas Union, *World LNG Report 2011* <http://www.igu.org/igu-publications/LNG%20Report%202011.pdf> (June 2012).

³⁸ Natural Gas Exch. *Electronic Trading in Physical and Financial Futures Contracts*, <http://www.ngx.com/natgas.html> (last updated Apr. 26, 2013).

³⁹ YCharts, *Henry Hub Natural Gas Spot Prices*, http://ycharts.com/indicators/natural_gas_spot_price (last accessed Apr. 10, 2013).

Republic of South Korea and Chile as realistic export destinations among the FTA countries with national treatment of natural gas. Therefore, it is realistic to assume that the majority of natural gas exports from the United States will go to non-FTA countries, and thus most applications will not enjoy the automatic designation of being consistent with the public interest and will have to go through the steps set forth by the DOE in the Code of Federal Regulations (“C.F.R.”).

II

The Code of Federal Regulations

A. The C.F.R. and The Public Interest Analysis

The C.F.R. set forth the information required in an application to export LNG and includes, amongst other things, the justification for seeking DOE authorization to export LNG and the reasons why it would not be inconsistent with the public interest. Specifically, an applicant must show, amongst other things, “the lack of a national or regional need for the gas”⁴⁰ in order to satisfy the public interest requirement.⁴¹ Therefore, Section 3(a), coupled with 10 C.F.R. § 590.201 and 10 C.F.R. §590.202(b)(6), make “public interest” the central focus of both the applicant and the DOE for applications to export natural gas to non-FTA countries.

1. Determining What Criteria is Considered in the Public Interest Analysis

Unfortunately, there has been little-to-no official guidance as to what criteria the DOE considers when determining whether allowing the exportation of natural gas is in the public interest as required by the NGA and the regulations set forth by the DOE. The only explicit official criterion provided by the DOE is that there must be a lack of domestic need for natural

⁴⁰ § 590.202(b)(6).

⁴¹ § 590.202(b)(6).

gas.⁴² More insight, albeit only through a statement before the United States Senate Committee on Energy and Natural Resources, was provided by Christopher Smith, Deputy Assistant Secretary for Oil and Natural Gas in the Office of Fossil Energy at the DOE. Deputy Assistant Secretary Smith stated

[a] wide range of criteria are considered as part of DOE's public interest review process, including: domestic need for the natural gas proposed for export, adequacy of domestic natural gas supply; U.S. energy security; impact on the U.S. economy (GDP), consumers and industry; jobs creation; U.S. balance of trade; international considerations; environmental considerations; consistency with DOE's long-standing policy of promoting competition in the marketplace through free negotiation of trade agreements; and other issues raised by commenters and/or interveners deemed relevant to the proceeding.⁴³

2. The Rebuttable Presumption in Practice

As confirmed by the DOE, the applicant enjoys a rebuttable presumption that his application is not inconsistent with the public interest.⁴⁴ and thus should not carry the burden of proving that it is the public interest. However, this has not been how the application process has worked out in practice. Cheniere, the first applicant to receive approval from the DOE to export natural gas to non-FTA countries, felt obligated to devote a substantial amount of time addressing public interest in their application, as evidenced by the fact that half of their application is devoted to the subject.⁴⁵ Furthermore, the DOE cited the arguments set forth by Cheniere when discussing the evidence supporting that the authorization to export natural gas was in the public interest.⁴⁶ Thus, despite DOE's own Policy Guidelines placing the burden of

⁴² U.S. Dept. of Energy, Delegation Order 0204-111 (Feb. 22, 1984), <https://www.directives.doe.gov/sdoa/delegations-documents/204.111.pdf/view>.

⁴³ Smith, *supra* note 27, at 4.

⁴⁴ Sabine Pass Liquefaction, LLC., DOE/FE Order No. 2961, (May 20, 2011).

⁴⁵ Sabine Pass Liquefaction, LLC., (Aug. 11, 2010), http://www.cheniere.com/CQP_documents/FTA%20app%2081110%20final.pdf

⁴⁶ DOE/FE Order No. 2961, *supra* note 42, at 4-6.

proving an application is against the public interest on the opposing party,⁴⁷ in practice this onerous burden has been placed on the applicant. In turn, this has put applicants in a precarious situation where, by following the DOE's Policy Guidelines and not bearing the burden of proving their application is consistent with the public interest, they run the risk of being rejected on those grounds. Alternatively, applicants can expend considerable time and resources providing evidence that it is consistent with the public interest and thereby delaying and making more costly the application process.

3. The Lack of Clarity Surrounding the Public Interest Analysis Creates Issues

The lack of clarity and nebulous nature of the public policy criteria, in addition to the contradiction between the Policy Guidelines and DOE practice, has created an untenable situation for participants through every phase of production, transportation, and sale of natural gas. Not knowing exactly the criteria by which their application will be judged as it relates to the public interest creates substantial uncertainty. In a high capital industry, where a single export terminal may cost several billion dollars, a polysemic phrase, which determines the validity of an application, has a chilling effect on both investment and commerce due to the uncertainty it brings to the process.

4. Required Data Components Are Difficult to Ascertain at Time of Application

In addition to the public policy element, the application must also include, "to the extent possible" and "all factual matters shall be supported to the extent practicable by the necessary data or documents".⁴⁸ the scope of the project, "including the volumes of natural gas involved,

⁴⁷ Policy Guidelines and Delegation Orders Relating to the Regulation of Imported Natural Gas, 49 Fed. Reg. 6,6684 (Feb. 22, 1984) [hereinafter *Policy Guidelines*].

⁴⁸ 10 C.F.R. § 590.202(b).

expressed in either Mcf or Bcf and their Btu equivalents;⁴⁹ the dates of commencement and completion of the proposed export;⁵⁰ the facility or facilities to be utilized or constructed;⁵¹ the terms of the transaction, including terms that affect the marketability of the gas;⁵² the potential environmental impact of the project;⁵³ the identification of all participants in the transaction;⁵⁴ “the lack of a national or regional need for the gas.”⁵⁵

These elements of the application, although on their face may seem easy to satisfy, are often difficult due to the peculiarities of the natural gas industry. For example, the requirement that an applicant provide a start date seems a simple element with which to comply. However, a firm start date of exporting often is not set before an application is approved or when an export facility must be constructed. In the same vein, it is often difficult for an applicant to provide the terms of the transaction and all the parties involved as required by 10 C.F.R. § 590.202(b)(2)-(4) because contracts are not often finalized before authorization to export is granted. Also, as expounded in the Sabine Pass application, it is often difficult to specify the origin of the gas as required by 10 C.F.R. § 590.202(b)(2) because of the liquidity of the United States natural gas supply market; “it has evolved to the point where buyers and sellers no longer enter into the types of long-term gas purchase and sales arrangements that were common at the time the DOE regulations requiring the filing of transaction-specific information were promulgated.”⁵⁶

In the face of these challenges, the DOE has shown flexibility in not strictly enforcing these requirements. Focusing on the “to the extent applicable” and “to the extent possible”

⁴⁹ 10 C.F.R. § 590.202(b)(1).

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² 10 C.F.R. § 590.202(b)(4).

⁵³ 10 C.F.R. § 590.202(b)(7).

⁵⁴ 10 C.F.R. § 590.202(b)(2).

⁵⁵ 10 C.F.R. § 590.202(b)(6).

⁵⁶ Culotta, *supra* note 28, at 71.

language of 10 C.F.R. §590.202(b), and allowing applications to continue on the promise that the information will be supplied “if and when such contracts are executed,” an application thereby abides by the regulation’s call to provide such information “when practicable.”⁵⁷ These issues, however, elucidate a general problem with the current regulations: they were devised for a natural gas market that no longer exists.

B. Procedural Requirements That Carry the Potential for Substantial Delay

1. Motions to Intervene

The procedural requirements of an application to export natural gas to non-FTA countries are spelled out in 10 C.F.R. § 590.301-317. Motions for interventions and answers are addressed in § 590.303; in particular subsection (b) allows any person who wishes to become a party to a proceeding shall file a motion to intervene.⁵⁸ A motion to intervene should include the facts upon which the petitioner’s claim of interest is based, and “to the extent known, the position taken by the movant and the factual and legal basis for such positions in order to advise the parties and the Assistant Secretary as to the specific issues of policy, fact, or law to be raised or controverted.”⁵⁹ A motion to intervene must be filed by the date fixed for filing in the applicable FE notice, unless otherwise permitted by the Assistant Secretary,⁶⁰ and must be answered within fifteen days.⁶¹ If a motion to intervene is not answered, the motion to intervene is deemed granted unless the Assistant Secretary denies the motion in whole or in part.⁶² Similar provisions are set forth for protests under 10 C.F.R. § 590.304, including subsection (e), which also defers to the Assistant Secretary to set a deadline for submission of protests.

⁵⁷ DOE/FE Order No. 2961, *supra* note 42, at 41.

⁵⁸ 10 C.F.R. § 590.303(b).

⁵⁹ 10 C.F.R. § 590.303(b)-(c).

⁶⁰ 10 C.F.R. § 590.303(d).

⁶¹ 10 C.F.R. § 590.303(e).

⁶² 10 C.F.R. § 590.303(g).

a. Time for Motions to Intervene

Of particular interest in the procedures set forth in *Interventions and Answers* and *Protests and Answers* is that there is no set time limit for interveners or protestors to file motions for intervention⁶³. However, *Notice of Applications* states the notice of application must provide at least thirty days for persons to file protests and motions to intervene⁶⁴. Thus, the Assistant Secretary has leeway in regard to how long the application process lasts⁶⁵. In the Sabine Pass application, the first application for natural gas export in the lower forty-eight states, the Assistant Secretary concluded a sixty day period to submit motions for intervention, notices of intervention, public comments or motions for additional procedures “[d]ue to the novelty and complexity”⁶⁶ of the application. However, there have been eighteen applications for natural gas exports to non-FTA countries since the Sabine Pass application, and the sixty-day deadline is still being used.⁶⁷ Thus, it seems that the original justification for providing for sixty days to file any of the above motions is no longer valid, but it would appear that the Assistant Secretary has not reconsidered this timeframe.

2. The Right to a Trial-Type Hearing

Another key procedural provision is § 590.313(a), which grants any party the right to “file a motion for a trial-type hearing for the purpose of taking evidence on relevant and material

⁶³ See §§ 590.303 and 590.304(e).

⁶⁴ See § 590.205(a).

⁶⁵ See § 590.303(d).

⁶⁶ Application for Long-Term Authorization to Export Liquefied Natural Gas, 75 Fed. Reg. 62512-14, (Oct. 12, 2010).

⁶⁷ *Id.*

issues of fact genuinely in dispute in the proceeding.”⁶⁸ This section also provides that parties have the right to request discovery, present witness testimony, to cross-examine witnesses and to present documentary evidence.⁶⁹ If the petitioner can raise a material issue of fact genuinely in dispute, then it is entitled to a hearing pursuant to the Administrative Procedure Act (“APA”) § 554.⁷⁰

In applying this regulation, courts have held that a trial-type hearing should be held when “it would tend to enhance the accuracy of decision-making; that is, only for determinations of adjudicative facts.”⁷¹ Examples of disputed material fact that tend to enhance the accuracy of decision-making recognized by the courts are: the need for the natural gas,⁷² security of supply,⁷³ competitiveness,⁷⁴ the effect on national security,⁷⁵ and the identity of suppliers and purchasers.⁷⁶ It is important to note that, given the current trend in natural gas contracts discussed briefly above, often times the identities of suppliers and purchasers are difficult, if not impossible to identify before authorization is granted. Also, it may be impossible to identify suppliers of gas at any time because of the liquid nature of the gas market and the extensive pipeline in the United States.

3. Complaints on Already Existing Import/Export Orders

The final procedural regulation that could cause substantial delay to the processing of an application is 10 C.F.R. § 590.317(a). This regulation allows “[a]ny person may file a complaint

⁶⁸ 10 C.F.R. § 590.313(a).

⁶⁹ 10 C.F.R. § 590.313(b).

⁷⁰ See, *General Motors Corp. v. FERC*, 656 F. 2d 791, 798 (D.C. Cir. 1981).

⁷¹ *Panhandle Producers & Royalty Owners Ass’n . Economic Regulatory Admin.*, 847 F. 2d 1168, 1178 (5th Cir. 1988); *New England Fuel Institute v. Economic Regulatory Admin.*, 875 F. 2d 882, 886 (D.C. Cir. 1989) .

⁷² *Id.* at 866.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Panhandle*, 847 F.2d at 1178.

⁷⁶ *Id.*

objecting to the actions by any other person under any...order or authorization applicable to an *existing* import or export authorization”⁷⁷. There have been few if any examples of a complaint on record, but it could conceivably cause a temporary cease and desist order on exports if the complaint is sufficiently detailed enough to raise doubt as to whether the exporter is conforming to the authorization order.

C. Conditional Orders and Final Orders

Once the DOE is prepared to make a decision, it has a few tools at its disposal. For instance, 10 C.F.R. § 590.402 allows the DOE to issue conditional orders. This allows the Assistant Secretary to issue a conditional order “at any time during a proceeding prior to issuance of a final opinion and order.”⁷⁸ The DOE exercised this option in the Sabine Pass application process, conditioning the final approval on the “satisfactory completion of the environmental review process . . . and on issuance by DOE/FE of a finding of no significant impact or a record of decision pursuant to NEPA.”⁷⁹ This allows an applicant to provide potential natural gas suppliers and buyers with some assurance that the authorization will come, reducing risk and allowing for more concrete and serious negotiations, which in turn helps the applicant comply with 10 C.F.R. § 590.202(b)(2)-(4).

The DOE may also issue “a final opinion and order and attach such conditions thereto as may be required by the public interest.”⁸⁰ There are not many examples of conditions placed on final orders, but one example is where the DOE required that imports of natural gas be transported solely by pipelines that were open access carriers.⁸¹

⁷⁷ 10 C.F.R. § 590.317(a).

⁷⁸ 10 C.F.R. § 590.402.

⁷⁹ DOE/FE Order No. 2961, 78 Fed. Reg. At 21,352.

⁸⁰ 10 C.F.R. § 590.404.

⁸¹ FERC Order No. 436. 50 Fed. Reg. 42,408 (1985).

Finally, any person, after a final opinion and order, condition order, or emergency interim order may file an application for rehearing within thirty days after issuance.⁸² The application must state the alleged errors in the order, and must set forth specifically the grounds upon which the application is based.⁸³ There are no cases on point dealing with this regulation, but it is important to note that an application for rehearing does not operate as a stay of the Assistant Secretary's order, unless the Assistant Secretary so orders.⁸⁴ The Assistant Secretary is also within his discretion to deny or grant the application for rehearing, or modify or abrogate the final order without further proceedings.⁸⁵ If the Assistant Secretary does not respond within thirty days, it is deemed denied by law.⁸⁶ The export application process described above is not the only authorization a potential exporter needs in order to begin operations. If the exporter wishes to build its own onshore or within state waters natural gas liquefaction facility, it must seek authorization from FERC.

III

The Energy Policy Act of 2005

A. Modifications to the Natural Gas Act

1. Natural Gas Terminals and FERC

In 2005, Congress passed the Energy Policy Act of 2005 ("EPACT") which modified or imposed legislation across the energy industry, including natural gas. Among its changes in the natural gas sector, EPACT made substantial amendments to the NGA⁸⁷. Specifically, Section

⁸² 10 C.F.R. § 590.501(a).

⁸³ 10 C.F.R. § 590.501(b).

⁸⁴ 10 C.F.R. § 590.502.

⁸⁵ 10 C.F.R. § 590.503.

⁸⁶ 10 C.F.R. § 590.504.

⁸⁷ See Generally, Energy Policy Act of 2005, Pub. L. No. 109-058, 199 Stat. 594.

311(c)(2) of EPACT grants “[t]he Commission shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal.”⁸⁸

The Commission, as mentioned above, refers to FERC. Section 311 also amends Section 717(b) of the NGA, providing the definition for “LNG Terminal,” which states: “LNG Terminal includes all natural gas facilities located onshore or in State waters that are used to receive, unload, store, transport, gasify, liquefy or process natural gas that is imported to the United States from a foreign country, [or] exported to a foreign country from the United States.”⁸⁹

Taken together, EPACT grants FERC exclusive authority to regulate if, when, where and how LNG terminals are built.

2. Statutory Framework for Processing Natural Gas Terminal Applications

In order to provide guidelines for FERC to administer this task, EPACT also amended Section 3 of the NGA, giving general directions as to how the application process should proceed. When receiving an application, FERC must set the matter for hearing, decide the matter in accordance with this subsection and issue or deny the appropriate order accordingly.⁹⁰ The NGA also provides that FERC is within its discretion to “approve an application an application . . . in whole or part, with such modifications and upon such terms and conditions as the Commission find necessary or appropriate.”⁹¹ To this end, FERC has enacted regulations to provide rules and clarity to applicants and its administrators. The following regulations govern

⁸⁸ Energy Policy Act of 2005, Pub. L. No. 109-058, 119 Stat. 594.

⁸⁹ *Id.*

⁹⁰ Energy Policy Act of 2005, § 311(c)(2).

⁹¹ 15 U.S.C. § 717b(e)(3)(A).

the application process for authorization to construct, operate, or modify facilities used for the export or import of natural gas.⁹²

IV

The Code of Federal Regulations Governing Natural Gas Terminal Applications

A. Introduction

1. Public Interest Defined

FERC requires an applicant to include in its application a “statement demonstrating that the proposal or proposed construction is not inconsistent with the public interest.”⁹³ If possible, an applicant should demonstrate that the proposal will “improve access to supplies of natural gas, serve new market demand, enhance the reliability, security, and/or flexibility of the applicant’s pipeline system, improve the dependability of international energy trade, or enhance competition within the United States for natural gas transportation or supply.”⁹⁴ Furthermore, the applicant should demonstrate that the new terminal will not “impair the ability of the applicant to render transportation service in the United States at reasonable rates to its existing customers,”⁹⁵ and finally that the facility will not involve “any existing contracts between the applicant and a foreign government or person concerning the control of operations or rates for the delivery or receipt of natural gas which may restrict or prevent other United States companies from extending their activities in the same general area.”⁹⁶

Therefore, where there is a lack of clarity in the DOE/FE application process as to whether an applicant should devote substantial time and resources providing evidence to prove

⁹² 18 C.F.R. § 153.1.

⁹³ 18 C.F.R. § 153.7(c)(1).

⁹⁴ 18 C.F.R. § 153.7(c)(1)(i).

⁹⁵ 18 C.F.R. § 153.7(c)(1)(ii).

⁹⁶ 18 C.F.R. § 153.7(c)(1)(iii).

their request is in not inconsistent with the public interest, the FERC application explicitly asks the applicant to do so. This provides clarity lacking in the DOE/FE process, and puts an applicant on notice that they should use their application as an opportunity to persuade the agency that their request is not inconsistent with the public interest.

2. Data Requirements

FERC also requires an applicant to provide exhibits detailing “the financial and corporate relationship existing between applicant and any other person or corporation.”⁹⁷ The same problem arises here as it did with the same requirement in the DOE/FE authorization process. Often times the parties to an LNG export contract are not yet known before the actual authorization can be given, so rigid enforcement of this requirement could prove to be an insurmountable hurdle in the application process.

In addition to the application for authorization to construct, operate or modify a natural gas import or export facility, an applicant must also seek a certificate of public convenience and necessity.⁹⁸ The following regulations govern that process, and make clear that the requirements they set forth are considered “forthright obligation[s]” that are unavoidable.⁹⁹

3. Public Interest Analysis Requirements

Among other things, the applicant must include “[t]he facts relied upon by applicant to show that the proposed service, sale, operation, construction, extension, or acquisition is or will be *required* by the present or future public convenience and necessity.”¹⁰⁰ The public convenience and necessity standard gives FERC tremendous discretion to decide whether or not to authorize a project. As this standard applies to natural gas import and export terminals, the

⁹⁷ 18 C.F.R. § 153.8(1)(a)(2).

⁹⁸ 18 C.F.R. § 157.5.

⁹⁹ *Id.*

¹⁰⁰ 18 C.F.R. § 157.6(b)(2) (emphasis added).

Commission has applied the public interest balancing test described above, and if it finds that the benefits outweigh the adverse effects, then it allows the market to decide which projects will be built.¹⁰¹ This policy has shown that it allows FERC to issue certificates and let the market dictate which of those certified projects get built.

The proposed Jordan Cove terminal exemplifies this. FERC issued a certificate for an import facility, and the market changed so dramatically that the import terminal was no longer economically viable, so FERC allowed Jordan Cove to vacate the order and reapply as an export facility.¹⁰² Coupled with the option for an abbreviated application,¹⁰³ this pair of regulations allows FERC to respond quickly to changing market conditions.

B. Interventions and Protests

As with the DOE/FE application process, the FERC process also allows for interventions and protests.¹⁰⁴ Any person who wishes to participate in the proceedings, as well as any interested regulatory agency, may file a petition to intervene.¹⁰⁵ The regulation itself does not set any time limit for someone submit an intervention request, but rather allows the time limit to be set in the notice of application.¹⁰⁶ In a recent notice of application, FERC allowed sixty days for protests, motions to intervene, notices of intervention, requests for additional procedure, and written comments.¹⁰⁷ In addition to these and extensive exhibit procedures, FERC requires

¹⁰¹ 139 FERC ¶ 61,040 at 7.

¹⁰² *Id.*

¹⁰³ 18 C.F.R. § 157.7(a).

¹⁰⁴ 18 C.F.R. § 157.10.

¹⁰⁵ 18 C.F.R. § 157.10(a).

¹⁰⁶ *Id.*

¹⁰⁷ Jordan Cove Energy Project, L.P., 77 Fed. Reg. 33,446 (Fed. Regulatory Energy Comm'n Jun. 6, 2012).

certain pre-filing procedures be satisfied before an applicant can continue with the applications above.¹⁰⁸

C. The Pre-filing Process

The pre-filing process is extensive. First, an applicant must consult with the Director on the nature of the project, the content of the pre-filing request, and the status of the prospective applicant's progress toward obtaining the information required for the application.¹⁰⁹

Next, the applicant must submit a pre-filing application which addresses several issues, including a detailed description of the project such as maps and plans showing all major plant components;¹¹⁰ a list of all relevant state and federal agencies with permitting requirements,¹¹¹ and a list of at least three prospective third-party contractors, from which Commission staff may make a selection to assist in the preparation of the requisite NEPA document.¹¹²

Once the Director finds that a prospective applicant has adequately addressed the pre-filing requirements, the Director shall issue a notice of such finding, and the pre-filing process shall be deemed to have commenced.¹¹³ This step is crucial because an applicant is prohibited from submitting applications for certification of public convenience and necessity and authorization to construct, modify, or operate an LNG terminal until 180 days after the Director's notice.¹¹⁴

After the Director has issued notice that the pre-filing process has commenced, an applicant must do several more tasks, including establishing dates and locations of meetings with

¹⁰⁸ 18 C.F.R. § 157.21(a).

¹⁰⁹ 18 C.F.R. § 157.21(c).

¹¹⁰ 18 C.F.R. § 157.21(d)(4).

¹¹¹ 18 C.F.R. § 157.21(d)(5).

¹¹² 18 C.F.R. § 157.21(d)(8).

¹¹³ 18 C.F.R. § 157.21(e)(1).

¹¹⁴ 18 C.F.R. § 157.21(a)(2)(i).

stakeholders and Commission staff;¹¹⁵ file monthly status reports detailing project activities,¹¹⁶ and submit several Resource Reports.¹¹⁷ After these pre-filing requirements are satisfied, but before an authorization for construction can be granted, an applicant must assist FERC, through a third party contractor,¹¹⁸ in conducting an environmental assessment (“EA”) in order to comply with NEPA.¹¹⁹

1. Environmental Assessment Requirement

For the purposes of an LNG terminal, an EA means a concise public document that provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement (“EIS”) or a finding of no significant impact (“FONSI”).¹²⁰ The public document also aids FERC’s compliance with NEPA when no EIS is necessary,¹²¹ and facilitates the preparation of an EIS when one is necessary.¹²² An EIS is a detailed written statement required by section 102(2)(C) of NEPA.¹²³ A FONSI is a document briefly presenting the reason why an action will not have a significant effect on the human environment and for which an EIS will not be prepared.¹²⁴ Although FERC and the third party contractor draft the EA, FERC still requires the applicant to submit an environmental report to assist in the drafting of an EA.¹²⁵ The

¹¹⁵ 18 C.F.R. § 157.21(f)(1).

¹¹⁶ 18 C.F.R. § 157.21(f)(6).

¹¹⁷ 18 C.F.R. § 157.21(f)(11).

¹¹⁸ 18 C.F.R. § 158.21(d)(8).

¹¹⁹ 18 C.F.R. § 380.5(b)(1).

¹²⁰ 18 C.F.R. § 380.2(d)(1).

¹²¹ 18 C.F.R. § 380.2(b)(2).

¹²² 18 C.F.R. § 380.2(b)(3).

¹²³ 18 C.F.R. § 380.2(f).

¹²⁴ 18 C.F.R. § 380.2(g).

¹²⁵ 18 C.F.R. § 380.3.

environmental report is made up of the thirteen Resource Reports mentioned above in the pre-filing process.¹²⁶

Each of the thirteen reports must address conditions or resources that might be directly or indirectly affected by the project;¹²⁷ identify significant environmental effects expected to occur as a result of the project;¹²⁸ identify significant environmental the effects of construction, operation, and termination of the project,¹²⁹ and mitigation measures,¹³⁰ among other things. The regulations go on to specify the topic of each of the thirteen resource reports, including water use and quality,¹³¹ land use,¹³² and air and noise quality.¹³³

Because the Sabine Pass application is the only application to have gone through pre-filing to process through the resource report and EA phase to final approval, it is helpful to look at its application process. Cheniere Energy, Inc. filed its initial resource report drafts on September 3, 2010.¹³⁴ Over the next few months it submitted drafts three more time, and submitted the final versions on January 31, 2011.¹³⁵ The EA was submitted in December 2011.¹³⁶

Despite 18 C.F.R. § 380.2(d)(1) defining an EA as a concise document, the Sabine Pass EA is 167 pages.¹³⁷ As stated before, the Resource Reports are used to assist FERC in the drafting of the EA, but it took roughly eleven months from the filing of the final resource reports

¹²⁶ 18 C.F.R. § 380.12(a)(1).

¹²⁷ 18 C.F.R. § 380.12(b)(1).

¹²⁸ 18 C.F.R. § 380.12(b)(2).

¹²⁹ 18 C.F.R. § 380.12(b)(3).

¹³⁰ 18 C.F.R. § 380.12(b)(4).

¹³¹ 18 C.F.R. § 380.12(d).

¹³² 18 C.F.R. § 380.12(j).

¹³³ 18 C.F.R. § 380.12(k).

¹³⁴ Cheniere, *Project Documentation: FERC Documents*,

http://www.cheniere.com/sabine_liquefaction/FERC_prefiling.shtml (last accessed Apr. 26, 2013).

¹³⁵ *Id.*

¹³⁶ Fed. Energy Regulatory Comm'n, *Environmental Assessment for the Sabine Pass Liquefaction Project*, Docket No. CP11-72-000 (Dec. 2011).

¹³⁷ *Id.*

to the issuance of the EA. Although it took a substantial amount of time for FERC to publish the EA, the conclusion it drew was very favorable to Cheniere and future LNG export facility applicants. The EA found that the construction and operation of the Sabine Pass facilities “in accordance with its application, supplements and staff’s mitigation measures . . . would not constitute a major federal action significantly affecting the quality of the human environment,”¹³⁸ and thus recommended the Commission issue a FONSI.¹³⁹ The recommendation, however, came with fifty-three conditions.¹⁴⁰ This finding was challenged by several environmental groups, but was eventually affirmed in a FERC Commission Opinion.¹⁴¹ The order of a FONSI means an EIS need not be prepared,¹⁴² and therefore the applicant’s NEPA requirements are satisfied.

2. Complying with the Endangered Species Act

Along with NEPA, applicant then must satisfy Endangered Species Act (“ESA”) requirements.¹⁴³ The applicant must consult with the Fish and Wildlife Service (“FWS”) and/or the National Marine Fisheries Service (“NMFS”), which provides information regarding threatened or endangered species and their critical habitat.¹⁴⁴ If either the FWS or the NMFS decide that any species or habitat has the potential to be impacted by the project, then the applicant must consult with the agency to develop methods to avoid or mitigate the potential impact,¹⁴⁵ and the applicant must prepare a Biological Assessment.¹⁴⁶ FERC will then formally

¹³⁸ *Id.* at 143.

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 143-50

¹⁴¹ Sabine Pass Liquefaction, LLC., 140 FERC ¶ 61,076 at 8.

¹⁴² 18 C.F.R. 380.6(b).

¹⁴³ 18 C.F.R. § 380.13.

¹⁴⁴ 18 C.F.R. § 380.13(b)(2)(i)-(ii).

¹⁴⁵ 18 C.F.R. § 380.13(b)(4)(i).

¹⁴⁶ *Id.* at (ii).

consult with NMFS and/or FWS,¹⁴⁷ and the appropriate agency will provide FERC with a Biological Opinion.¹⁴⁸

V

The Public Interest Analysis in Detail

A. Introduction

Once an applicant has navigated the pre-filing regulation requirements, then the FERC authorization to construct, operate, or modify facilities used for the export or import of natural gas, and the certification of public convenience, and necessity processes described above begin. Nothing bars an applicant from pursuing this process coextensively with the DOE/FE process detailed earlier, as Cheniere did in its Sabine Pass applications. Both the FERC decision to certify public convenience and necessity and the DOE/FE decision to grant authorization to export natural gas turn on a similar if not identical factor: the public interest.

The question of whether allowing the export of natural gas is in the public interest is a hotly debated topic across the social and economic spectrums. Politicians, potential importers, industry, environmental groups, economists, the utilities and their consumers, and the upstream, midstream, and downstream actors in the oil and gas industry and their service providers have argued the benefits and disadvantages of allowing domestic natural gas to be shipped abroad. Many of the topics of debate coincide with the criteria DOE considers when making a determination of whether an application is within the public interest.

¹⁴⁷ 18 C.F.R. § 380.13(d).

¹⁴⁸ 18 C.F.R. § 380.13(d)(4).

B. The Criteria Used in the Public Interest Analysis

1. International Considerations

One of the criteria DOE uses is “international considerations,”¹⁴⁹ and although rather vague, it can reasonably be interpreted as geopolitical considerations. Proponents of natural gas exports argue that it can serve as a tool for political influence to those countries that import natural gas in important regions across the globe, specifically East Asia and Europe. In turn, exporting natural gas to these regions either reduces the influence of countries with which the U.S. has diplomatic tension, such as Russia, Iran, and Venezuela, or aids and stabilizes allies in very significant strategic geopolitical locations, such as South Korea and Japan.

It is projected that the U.S. shale gas supply could reduce those three countries’ market share from 33% to 26% by 2040.¹⁵⁰ Prior to the shale breakthrough, Iran and Russia were expected to account for more than half of the world’s natural gas resources,¹⁵¹ Russia, in particular, had voiced a desire to leverage its position and create a cartel of gas producers a la OPEC,¹⁵² and with it the geopolitical instability the world has experienced over the past forty years relating to oil.¹⁵³ As for Iran and Venezuela, the Baker Institute projects that unfettered U.S. natural gas development delays their rise to prominence in the global gas market by twenty and fifteen years, respectively.¹⁵⁴ Thus, U.S. shale gas supplies significantly delay Iran’s ability

¹⁴⁹ Smith, *supra* note 27, at 4.

¹⁵⁰ Peter R. Hartley et al., James A. Baker Institute for Public Policy, *Shale Gas and U.S. National Security* 13 (2011).

¹⁵¹ Hartley, *supra* note 150, at 28.

¹⁵² Steve Mufson, *A New OPEC for Gas?* WASH. POST (Oct. 28, 2010)

http://newsweek.washingtonpost.com/postglobal/energywire/2008/10/a_new_opec_for_gas.html.

¹⁵³ Hartley, *supra* note 150, at 28.

¹⁵⁴ *Id.* at 29.

to tap natural gas resources as a means of energy diplomacy.¹⁵⁵ These developments are very important for Europe's future energy security.

a. European Geopolitics

Currently, Europe is a significant consumer of natural gas, constituting nearly 14% of global consumption.¹⁵⁶ Projections show that starting in 2014, Europe will dramatically increase its imports of natural gas, jumping almost 2tcf from 2013 levels.¹⁵⁷ Imports are projected to steadily rise continually through 2040 to over 10tcf, more than double 2012 import levels.¹⁵⁸ These projections could be low based on the fact that Germany plans on closing all of its nuclear power plants by 2022.¹⁵⁹ At the present time, Europe imports 60.3% of its natural gas,¹⁶⁰ 36% of which is imported from Russia through pipelines that run through Ukraine and Belarus.¹⁶¹ Not only has Russia used this reliance for its own political gain,¹⁶² but also Ukraine and Belarus have also cut off the flow of gas twice since 2006 for political gain.¹⁶³ Despite its current reliance on Russian gas, Europe does have the infrastructure to import LNG, and would most likely have the desire to import from the U.S.

¹⁵⁵ *Id.*

¹⁵⁶ Kristine Berzins, Presentation at the Aspen Institute: American Institute for Clean Skies, European Views on American Natural Gas Exports 11 (Feb. 21, 2013).

¹⁵⁷ Berzins, *supra* note 156, at 11.

¹⁵⁸ *Id.*

¹⁵⁹ Stephen Evans, *Germany: Nuclear Power Plants to Close by 2022* BRIT. BROADCAST CORP. (May 30, 2011) <http://www.bbc.co.uk/news/world-europe-13592208>.

¹⁶⁰ Berzins, *supra* note 156, at 13.

¹⁶¹ Nat'l Pub. Radio, *From Russia to Europe: Natural Gas Pipeline*, <http://www.npr.org/news/graphics/2009/jan/russia-pipeline/> (last accessed Apr. 14, 2013).

¹⁶² See, Hartley, *supra* note 150, at 45; See also, Michael Ratner et al., Cong. Research Serv., *Europe's Energy Security: Options and Challenges to Natural Gas Supply* 3 (2013).

¹⁶³ Ratner, *supra* note 162, at 1.

In 2011, LNG comprised almost 20% of the EU's natural gas imports,¹⁶⁴ mainly from Qatar, Nigeria, Algeria, Trinidad, and Tobago.¹⁶⁵ Europe currently has sixteen LNG regasification terminals, with seven more under construction.¹⁶⁶ Furthermore, EU gas prices are indexed with oil, at the behest of Russia, and thus have been much higher than U.S. prices.¹⁶⁷ Therefore, the economic feasibility is there, and so is the desire.

European oil and gas companies have substantial stakes in U.S. shale plays, accumulating over 5 million net acres of shale fields.¹⁶⁸ These companies are also invested in proposed U.S. LNG export terminals.¹⁶⁹ Because European companies are so heavily invested in U.S. natural gas, and because U.S. prices are at record lows, there is a strong impetus for these companies to bring their gas to their home markets where prices are much higher.

The U.S. has also expressed a desire to aid Europe in its goal to diversify its energy supply. In an October 2012 speech, then Secretary of State Hillary Rodham Clinton stated that a major component of U.S. diplomacy was to “promote competition and prevent monopolies.”¹⁷⁰ To further exemplify the U.S. interest in European energy security, there is a U.S.-E.U. Energy Council, which seeks to promote energy security and diversified energy sources.¹⁷¹ Therefore, the political and infrastructural frameworks exist for the U.S. to greatly alleviate the tremendous political pressure on Europe from Russia.

¹⁶⁴ *Id.* at 2.

¹⁶⁵ Berzins, *supra* note 156, at 12.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* at 16.

¹⁶⁸ *Id.* at 20.

¹⁶⁹ *Id.* at 22.

¹⁷⁰ *Id.* at 23.

¹⁷¹ *Id.* at 24.

b. Complications Regarding U.S. LNG Exports to Europe

There are, however, several impediments to U.S. LNG exports to Europe. First, the fact that coal is being displaced by natural gas in the U.S. has resulted in coal finding a new home in Europe. In fact, the EU is the second fastest-growing coal market in the world.¹⁷² Second, Europe has its own shale gas deposits, which are estimated to be about 53 tcf at the moment.¹⁷³ Third, climate and emission concerns may stymie the importation of U.S. produced LNG. A recent EU study on the relative greenhouse gas emissions of natural gas from different sources suggested that shale from the U.S. has a higher emissions profile than natural gas obtained from any other source used in the EU today.¹⁷⁴ Finally, France has lobbied extensively behind the scenes against U.S. LNG imports because France sells large amount of nuclear-produced electricity to the rest of Europe, particularly to Germany since its decided to wind down their nuclear power plant network.¹⁷⁵

c. Asian Geopolitics

Similar to Europe, U.S. allies in the Far East have energy security concerns. Japan and South Korea are the two largest LNG importers in the world.¹⁷⁶ Japan's import levels are only expected to rise as it has suspended all but two nuclear power plants.¹⁷⁷ This large demand, coupled with extremely high prices (as high as \$18/MMBtu in Japan,¹⁷⁸ and South Korea paid an

¹⁷² *Id.* at 30.

¹⁷³ *Id.* at 31.

¹⁷⁴ *Id.* at 32.

¹⁷⁵ Interview with Richard J. Pierce, Jr., Lyle T. Alverson Professor of Law, The George Washington University Law School, (Mar. 20, 2013).

¹⁷⁶ U.S. Energy Info. Admin., *Korea, South*, <http://www.eia.gov/countries/country-data.cfm> (last updated May 30, 2013).

¹⁷⁷ Atsushi Saiganji, Tokyo Gas Co., Ltd., Presentation at the Aspen Institute: American Institute for Clean Skies: Current Situation in Japan and Expectation for LNG Export from the U.S. (Feb. 21, 2013).

¹⁷⁸ Dan Strumpf & Mari Iwata, *Japan Plans LNG Futures Contract*, WALL STREET JOURNAL (Mar. 31, 2013) <http://online.wsj.com/article/SB10001424127887323361804578390640601070664.html>.

average of \$14.57MMBtu in 2012¹⁷⁹), means there is a tremendous opportunity for U.S. natural gas producers to make money as well as a tremendous desire from these two countries for more natural gas to flood the world market and thereby reduce prices.

Proponents of using natural gas for geopolitical influence cite the need for Japan and South Korea to have energy security to offset threats from North Korea and to counterbalance China's increasing economic and political dominance in the region. As current events show, North Korea has become more belligerent under the new regime, and the threats seem to be more substantiated than in recent years. So much so that the U.S. has responded by sending missile defense systems to Guam to protect U.S. interests in the region.¹⁸⁰ This political instability has had economic ramifications in both South Korea and Japan.¹⁸¹ This, coupled with rising energy prices, could result in deindustrialization in Japan and South Korea,¹⁸² weakening U.S. allies in a vital region. Thus, diversifying natural gas has been a major governmental concern for both countries.¹⁸³

Regulatory impediments to exports of natural gas to South Korea are minimal due to the fact that is an FTA country with national treatment of natural gas with the U.S., and thus any exports to that country are automatically deemed within the public interest. Japan, however, does not enjoy this same treatment. This is not for a lack of desire on the Japanese side. Tokyo Gas,

¹⁷⁹ *South Korea Paid Average of \$2 per MMBtu More for its LNG Shipments During 2012*, LNG Journal (Jan. 15, 2013) [http://lngjournal.com/lng/index.php?option=com_k2&view=item&id=4074:south-korea-paid-average-of-\\$2-per-mmbtu-more-for-lng-cargoes-last-year](http://lngjournal.com/lng/index.php?option=com_k2&view=item&id=4074:south-korea-paid-average-of-$2-per-mmbtu-more-for-lng-cargoes-last-year).

¹⁸⁰ Jack Kim & Phil Stewart, *U.S. to Send Missile Defenses to Guam Over North Korea Threat*, REUTERS (Apr. 4, 2013) <http://www.reuters.com/article/2013/04/04/us-korea-north-idUSBRE93002620130404>.

¹⁸¹ Kim, *supra* note 180.

¹⁸² Sebastien Lechevalier EHESS Paris, *Deindustrialization in Japan and Korea: Implications from France* (2011).

¹⁸³ *E.g.*, Shirzad Azad, *South Korea's Quest for Energy Security in the Persian Gulf* (2011) http://www.siue.edu/EASTASIA/KR_QS_EN_SC_PG1.htm.

the largest natural gas utility in Japan,¹⁸⁴ stated in a presentation hosted by the Aspen Institute that it considers the U.S. as Japan’s “most reliable alliance partner” and “an ideal choice to address the major concerns” of energy insecurity.¹⁸⁵ Therefore, Japan has been lobbying Washington in order to push through applications for export authorizations where Japan is the country of destination.¹⁸⁶ Exports to the European and Asian markets, export proponents argue, not only serve U.S. political goals, but also have profound economic benefits.

B. Economic Impacts of Natural Gas Exports

1. The Energy Information Administration Study

Indeed, one of the main criteria by which DOE/FE determines whether an application is within the public interest is the export’s effect on the economy. Specifically, DOE/FE looks at the impact of the export on the U.S. GDP, consumers, industry, job creation, and U.S. balance of trade.¹⁸⁷ Although there is ample material on the subject, DOE/FE relies upon the EIA and NERA studies in evaluating the impact of exports on these factors,¹⁸⁸ so it is most helpful to highlight the major findings of these studies to understand DOE/FE’s rationale when evaluating applications in this dimension.

The DOE/FE commissioned the EIA study to assess how specified scenarios of increased natural gas exports could affect domestic energy markets, focusing on consumption, production, and prices.¹⁸⁹ The EIA study evaluates these impacts in the context of four scenarios:

¹⁸⁴ Platts, *Japan’s Tokyo Gas Takes 25% Stake at \$485 mil in US Barnett Basin in Texas*, (Mar. 31, 2013).

<http://www.platts.com/RSSFeedDetailedNews/RSSFeed/NaturalGas/7677093>

¹⁸⁵ Saiganji, *supra* note 177.

¹⁸⁶ Interview with Richard J. Pierce, Jr., Lyle T. Alverson Professor of Law, The George Washington University Law School, (Mar. 20, 2013).

¹⁸⁷ Smith, *supra* note 27, at 4.

¹⁸⁸ *Id.* at 9.

¹⁸⁹ U.S. Energy Info. Admin., *Effects of Increased Natural Gas Exports on Domestic Energy Markets* at 1 (2012), available at: http://www.eia.gov/analysis/requests/fe/pdf/fe_lng.pdf.

low export levels phased in at slow rate (“low/slow”); low exports phased in at a fast rate (“low/rapid”); high exports phased in slowly (“high/slow”); high exports phased in rapidly (“high/rapid”) and compares them to a baseline case of no exports.¹⁹⁰

The EIA study found that, even in the baseline case, U.S. natural gas prices at the wellhead are projected to rise over the long run,¹⁹¹ but still remain well below the price of crude oil on an energy-equivalent basis.¹⁹² In the low/slow scenario, wellhead price impacts peak at a 14% increase in 2022, but fall below 10% by 2026.¹⁹³ On the other end of the spectrum, the high/rapid scenario causes wellhead prices to rise by 36% by 2018, but fall to about 20% by 2026.¹⁹⁴ Either way, in all four scenarios and the baseline, wellhead prices rise for about 6-10 years then drop, half the time to levels below 10% of 2010 prices.¹⁹⁵

As to the impacts on natural gas supply, the EIA study found that the baseline natural gas production grows from 22.4 Tcf in 2015 to 26.3 Tcf in 2035, with an average of 24.2 Tcf in that same period.¹⁹⁶ Across the scenarios, domestic production increases, raising prices and thus reducing domestic consumption.¹⁹⁷ Impacts on consumption vary by sector.

In the baseline scenario, natural gas constitutes 23% of total power generated by electric power utilities.¹⁹⁸ However, in all export scenarios, the electric utilities reduce consumption the most of any sector, and in turn coal-fired generation and production increases by about 2-4%.¹⁹⁹

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.* at 2.

¹⁹³ *Id.* at 8.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ *Id.* at 10.

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* at 11.

¹⁹⁹ *Id.* at 12.

It should be noted, as well, that the rise in natural gas prices increases renewable electricity generation,²⁰⁰ which is relevant here and in the environmental impact discussion later.

Across all scenarios, industrial sector natural gas use falls, but the rate and degree by which consumption falls is based on how quickly natural gas prices rise²⁰¹ because the capital assets of industrial users have long useful lives. So, in the scenarios where prices rise quickly, consumers will not purchase gas-fired machinery,²⁰² and their consumption levels will in turn fall much more quickly than in scenarios where prices remain steady in the short-term and thus purchasing said equipment is economical.

In the residential, commercial and compressed natural gas vehicle sector, the impact of higher natural gas prices is minimal. At most, it is projected that consumption will be reduced by about 3% by 2035.²⁰³ End-use *energy* expenditures increase across all scenarios, but only marginally. In the slow/slow scenario, expenditures increase by 0.6% on average from 2015 to 2035,²⁰⁴ and 1.4% in the high/rapid scenario over that same timeframe. However, end-use natural gas expenditures experience greater increases, particularly depending on the sector. For example, residential natural gas expenditures increase about 3% on average in the low/slow scenario, and about 6% in the high/rapid scenario,²⁰⁵ whereas industrial expenditures increase by about 6.5% and about 14.5%, respectively.²⁰⁶ During this same time period, due to increased prices, the electric generators actually a decrease in natural gas expenditures, but an increase in overall costs

²⁰⁰ *Id.*

²⁰¹ *Id.* at 12-13.

²⁰² *Id.* at 13.

²⁰³ *Id.*

²⁰⁴ *Id.* at 14.

²⁰⁵ *Id.* at 15.

²⁰⁶ *Id.*

of power generation.²⁰⁷ Therefore, across all scenarios and all sectors, prices and expenditures go up, and so do the revenues of natural gas producers.

On average, across all scenarios, revenues to producers from exports increase from \$14 billion to \$32 billion from 2015 to 2035.²⁰⁸ It should be noted, however, that these projections do not take into account liquefaction costs necessary for exports out of pipeline,²⁰⁹ and also do not represent revenue generated from increased domestic prices.²¹⁰ Impacts to other energy sectors vary, but in general coal producers benefit from increased natural gas prices which in turn increases coal demand.²¹¹ The increase in coal use has a negative impact on the environment.

The increase in coal use in the electric generation sector, combined with increased CO₂ generation in the liquefaction process, is projected to result in an overall increase in CO₂ emissions. Specifically, emissions are expected to rise in the low/slow scenario by 0.5% from 2015 to 2035, or 1.0% in the high/rapid scenario over the same time period.²¹²

These projections constitute the entirety of the EIA report. As can be seen, the scope of the report is rather limited, and therefore it is difficult to draw any concrete macroeconomic conclusions from the data presented. This is probably why, in part, DOE/FE commissioned a similar report from NERA covering these topics more extensively.

2. The NERA Study Findings

The NERA study analyzes the same scenarios as the EIA study, but differs in that the EIA study was limited to the relationship between export levels and domestic prices without considering whether or not those quantities could be sold at high enough world prices to support

²⁰⁷ *Id.*

²⁰⁸ *Id.* at 16.

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.* at 17.

²¹² *Id.* at 19.

the calculated domestic prices.²¹³ This added consideration, along with others, resulted in different results from the EIA study.

The NERA study found that natural gas prices will increase across all scenarios, and analyzes its impact on welfare, GDP, aggregate consumption, aggregate investment, sectorial output changes, household income, and impacts on energy-intensive sectors. This paper briefly summarizes these findings.

NERA finds that all export scenarios are welfare-improving for U.S. consumers.²¹⁴ Somewhat surprisingly, the study found that the largest welfare improvement is found under the high export scenarios despite these scenarios producing the highest prices.²¹⁵ The sources of additional income for consumers are additional export revenues, and consumers who are owners of liquefaction plants receiving take-or-pay tolling charges.²¹⁶ These revenue streams, in aggregate, outweigh the loss associated with higher energy prices for consumers.²¹⁷

The NERA report finds that exports positively impact GDP both in the short and long term. In the short run, GDP impacts are more substantial because of investment in the liquefaction process, export revenues, resource income and additional wealth transfer in the form of tolling charges.²¹⁸ The positive impacts are less pronounced in the long term, but still remain positive because of higher resource income.²¹⁹ Again, as with welfare, the study finds that the higher the export volume, the greater the positive impact on GDP.²²⁰

²¹³ NERA Economic Consulting, *Macroeconomic Impacts of LNG Exports from the United States* at 3 (2013).

²¹⁴ *Id.* at 55.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ *Id.* at 56.

²¹⁹ *Id.*

²²⁰ *Id.*

The next macroeconomic indicator analyzed by NERA is aggregate consumption, which measures the total spending on goods and services in the economy.²²¹ Higher aggregate consumption suggests more economic activity and more purchasing power for consumers.²²² The report finds that consumption increases or remains unchanged until 2025 for almost all of the scenarios, indicating that the wealth transfer from exports provides net positive income for the consumer to spend after taking into account potential decreases in capital and wage income from reduced output.²²³

Aggregate investment tracks investment in the economy, and in this context investment to convert import terminals to export terminals and to build new export terminals. The report finds that investment could increase by as much as 0.10% in 2015, but due to natural gas price increases, consumers save less of their income for investment.²²⁴ The result is a drop in investment, which is most pronounced in the high export scenarios.²²⁵ Over the long term, investment drops 0.05%-0.08% across all scenarios.²²⁶ This is the first negative macroeconomic impact reported by NERA.

As noted above, NERA projects natural gas prices to rise across all scenarios, so it is no surprise that sectors of the economy that rely heavily on natural gas will be negatively effected. These sectors include electricity generators, energy-intensive sectors, and the manufacturing sector. The degree to which these sectors are affected relates to the level of exports, but the electricity and energy-intensive sectors are most negatively affected across all scenarios. Specifically, the electricity sector is projected to lose between 0.2% and 1%, the energy-intensive

²²¹ *Id.*

²²² *Id.*

²²³ *Id.* at 57.

²²⁴ *Id.* at 58.

²²⁵ *Id.*

²²⁶ *Id.* at 59.

sectors are projected to lose between 0.2% and 0.8%, the manufacturing sector loses 0.5%, and the impact on the services sector is minimal due to its lack of reliance on natural gas.²²⁷ From these macroeconomic analyses, NERA draws several conclusions.

First, NERA concludes that LNG exports will not drive the price of domestic natural gas to levels observed in countries that are willing to pay oil indexed prices.²²⁸ Further, U.S. exports will drive prices down in the regions where U.S. prices are competitive, while domestic prices will simultaneously rise.²²⁹ Although not explicitly stated, this observation would seem to suggest that domestic prices will reach a level where the added cost of liquefaction, transportation and regasification will not be as advantageous in relation to marginal cost of production, thus reducing exports.

Next, there are consistent net economic benefits for consumers across all scenarios, but the benefits generally become larger as the amount of exports increases.²³⁰ This is because consumers benefit most from an increase in wealth transfers and export revenues associated with high export volumes.²³¹ A related measure of economic benefit—GDP—also increases as a result of LNG exports.²³²

NERA also observes a shift in resource income between the natural gas dependent sectors and natural gas production, but the negative impacts on natural gas dependent sectors are minimal.²³³ Further, the harm is to low value-added industries.²³⁴ Finally, NERA only briefly touches on the impact of exports on U.S. balance of trade. NERA simply finds that exports will

²²⁷ *Id.* at 60.

²²⁸ *Id.* at 76.

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.* at 77.

²³³ *Id.*

²³⁴ *Id.*

improve the balance of trade.²³⁵ Another report found that, superficially, six billion cubic feet a day of exports would yield export revenues that equal about 5% of the 2010 and 2011 account deficits, while it also cautions that the actual impact would be smaller because it does not account for changes in individual behavior.²³⁶ In sum, NERA finds that the economic benefits overall outweigh the few negatives in all scenarios, and the most economic benefits occur in the highest export scenarios.

Although the NERA and EIA studies do a good job evaluating the economic elements of the public interest evaluation, they do not cover several other elements enumerated by Deputy Assistant Secretary for Oil and Natural Gas Christopher Smith. Because domestic need for the natural gas proposed for export, and issues raised by commenters and interveners are fact specific based on the application, this paper does not cover those criteria. That leaves adequacy of domestic natural gas supply, U.S. energy security, and environmental considerations as the remaining criteria to examine.

The adequacy of domestic supply is dependent on several factors, including price, cost of extraction, and consumption levels. The EIA, in its Early Release Overview of the Annual Energy Outlook 2013 (“AEO2013”), projects that U.S. natural gas production outpaces domestic consumption by 2020.²³⁷ The report also estimates that there are 2,214 Tcf of recoverable natural gas.²³⁸ At the present rate of domestic consumption, 24.1 Tcf per year,²³⁹ the domestic supply will last for ninety years. In the Sabine Pass approval, DOE/FE accepted Cheniere’s assertion that “future supply of domestic natural gas is sufficient to simultaneously support proposed . . .

²³⁵ *Id.* at 13.

²³⁶ Levi, *supra* note 11, at 10.

²³⁷ Energy Info. Admin., *Annual Energy Outlook 2013 Early Release Overview* at 1 (2013).

²³⁸ *Id.*

²³⁹ *Id.* at 8.

export volumes as well as domestic natural gas demand.”²⁴⁰ Further, one can surmise from the fact that none of the interveners or commenters could provide studies or material evidence to support a contrary conclusion that it is generally accepted that domestic supply is adequate, at least for the next twenty years. This general acceptance is also relevant to the question of U.S. energy security.

C. Domestic Supply Considerations

In its conditional approval of the Sabine Pass application, DOE/FE stated that the primary consideration of energy security is “whether the public will have sufficient gas over the term of the authorization to meet its needs.”²⁴¹ Thus, it is important to note that this question will hinge, in the future, on whether exports—taken cumulatively—will affect the ability for producers to meet domestic demand. This question is abstract as of now, because Sabine Pass is the only application approved. It is important to note, as DOE/FE did in its approval, that “the ability to export domestic gas . . . will greatly expand the market scope . . . and thus serve to encourage domestic production at times when U.S. market prices might not otherwise do so.”²⁴²

There are those, however, that say natural gas exports threaten national security by encouraging dependence on foreign oil. However, as noted both by the DOE/FE in its Sabine Pass approval,²⁴³ and by the EIA in AOE2013,²⁴⁴ natural gas production will co-produce natural gas liquids that can be substituted for petroleum products made from imported oil. Further, Cheniere provided, in the words of DOE/FE, an “uncontroverted study” that export authorization

²⁴⁰ Sabine Pass Liquefaction, LLC., DOE/FE Order No. 2961-B, (Jan. 25, 2013).

²⁴¹ *Id.* at 34.

²⁴² *Id.* at 35

²⁴³ *Id.*

²⁴⁴ Energy Info. Admin., *supra* note 229, at 10.

will result in the co-production of 128,000 barrels per day of natural gas liquids.²⁴⁵ However, regardless of whether domestic natural gas stays at home or goes abroad, there are environmental concerns associated with its production and use.

D. Environmental Considerations

When considering environmental impacts as it pertains to the public interest, DOE/FE defers to the extensive environmental studies required by the FERC application process,²⁴⁶ at least in the cases where the applicant has to file with FERC. As stated above, FERC issued a FONSI after the requisite EA was finished, and thus determined there was no significant impact to the quality of the human environment in the case of the Sabine Pass LNG terminal. These findings are fact specific, and cannot be expected to be replicated with every application, so it is more useful to analyze the broad environmental concerns associated with hydraulic fracturing (“fracking”), horizontal drilling, and increased CO₂ emissions associated with rising natural gas use.

The written testimony of Frances Beinecke, President of the Natural Resources Defense Council (“NRDC”), articulates several of these concerns. The testimony cites a report by the Secretary of Energy Advisory Board Shale Gas Subcommittee (“SEAB-SGS”), which identified four major areas of concern: possible drinking water pollution from methane and fracking fluids; air pollution; community disruption during shale production; and the cumulative adverse impacts of intensive shale production.²⁴⁷ In order to mitigate these impacts as well as assuage public concern, the NRDC urges Congress to act to force drilling companies to disclose chemicals used

²⁴⁵ DOE/FE Order No. 2961-B, *supra* note 232, at 35.

²⁴⁶ *Id.* at 40-41.

²⁴⁷ Beinecke, Francis, Statement to the Senate, Committee on Energy and Natural Resources. *Opportunities and Challenges for Natural Gas*, Hearing, Feb. 12, 2013. Available at: <http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?ID=0e5d5793-4e30-4fcd-a7c3-791c985b302e> (last updated Feb. 12, 2013).

in the fracking process, and gives several reasons as to why this step is necessary for effective environmental protection.

The NRDC proposes that natural gas producers be required by federal law to identify the chemicals used in fracking fluid injected into the ground.²⁴⁸ Although fourteen states require some level of disclosure, NRDC argues that the lack of standardized, uniform disclosure makes it difficult for researchers to study the impacts of fracking on health and the environment.²⁴⁹

Opponents to disclosure cite the proprietary interest drilling companies have in their fracking formulas, and that full public disclosure would compromise what drillers consider a trade secret.

Linked with disclosure is the concern of contaminated drinking water from injected fracking fluids. The NRDC cites a Pennsylvania study that documented evidence of drinking water contamination with methane associated with shale extraction.²⁵⁰ Another study cited reported severe impacts to livestock, including reproductive abnormalities, kidney and liver failure, and death in animals that drank from polluted ponds and creeks near fracking operations.²⁵¹ However, as the testimony notes, there have been no studies linking specific health impacts to drinking water contamination resulting from fracking operations,²⁵² so the question as to whether it happens is still being debated.

The NRDC also argues that the lack of chemical disclosure makes it difficult to identify the specific air pollutants emitted by natural gas producers. The NRDC cites a wide array of studies showing the negative health and environmental impacts of fracking operations. First, diesel emissions are more concentrated near fracking operations because of the increased truck

²⁴⁸ *Id.*

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Id.*

²⁵² *Id.*

traffic and heavy equipment use.²⁵³ Second, workplace investigations at fracking sites have shown hazardous levels of silica and diesel, posing a threat to exposed workers.²⁵⁴ Third, several studies have shown that volatile organic compounds (“VOCs”) are found in high concentrations near oil and gas facilities where fracking is being deployed.²⁵⁵

Finally, the NRDC discusses the climate change impacts of increased natural gas production resulting from improved fracking and drilling technologies. The production of natural gas produces significant methane emissions.²⁵⁶ Methane is a potent global warming pollutant, trapping at least 25 times more solar radiation than carbon dioxide over a 100-year period.²⁵⁷ Further, the oil and gas industry is the nation’s second largest industrial emitter of greenhouse gases, surpassed only by electric power plants, which also use natural gas.²⁵⁸ NRDC recommends that the oil and gas industry use methane control technologies that trap methane, which could be sold for \$2 billion annually, according to the testimony.²⁵⁹

Thus, the environmental concerns are both wide-ranging and serious. However, many of the concerns voiced by the NRDC and environmental groups in general, are more concerned with the fracking process in particular as opposed to the impact of exports and facilities. Although they are linked, because more exports will likely lead to more production, FERC and DOE/FE do not currently consider the impacts of how the natural gas is produced when evaluating the environmental impacts of allowing the gas to be exported. Therefore, this paper does not go further than DOE/FE and FERC, but it is important to be aware of the environmental

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ *Id.*

concern being expressed, as it could have a substantial impact on how much natural gas is available in the future, and the cost of extraction if new environmental regulation is imposed on the industry.

When taken all together, and as evidenced by the Sabine Pass process, it would appear that the NERA and EIA reports have influenced DOE/FE and FERC decision-making, creating a strong economic presumption that LNG exports are within the public interest. Thus, it would seem, that more LNG export authorizations are coming. The problem, however, is the time in which it takes DOE/FE and FERC to process these applications. This is a problem for several reasons, many of which are discussed above, including: the uncertainty it creates in a highly capital intensive industry and the small window of opportunity to capitalize on the great disparity between domestic and international market prices. Therefore, in order to speed up the application process, this paper makes the following recommendations.

VI

Recommendations

A. Removing the Distinction Between FTA and Non-FTA Applications

The easiest way to speed up the application process is to statutorily remove the distinction between FTA and non-FTA applications in the NGA. It can take as little as a month for an applicant to gain approval to export to FTA countries, while it took almost two and a half years for the Sabine Pass application to be approved by DOE/FE, and almost three and half years to complete the FERC application process.²⁶⁰ Although such an amendment to the NGA would not speed the FERC process, it would dramatically reduce the DOE/FE process. However, the

²⁶⁰ Hong. N. Huynh, *The U.S. Race to Export LNG*, 27 FALL NAT. RESOURCES & ENV'T 51 (2012).

likelihood of getting this Congress to act in this regard is remote.²⁶¹ The most realistic method of effecting change is through changing the regulations enacted by DOE governing these applications.

B. Modifying the CFR to Streamline the Application Process

1. APA Requirements

As with most federal administrative agencies, the rulemaking process is governed by the Administrative Procedure Act (“APA”). Section 553 of the APA requires, amongst other things, when rules are required by statute to be made on the record after opportunity for an agency hearing, then the agency must enact rules pursuant to APA §§ 556 and 557. Section 556(b) requires an oral evidentiary hearing, and subsection (d) states that a party is entitled to conduct cross-examination and present oral or documentary evidence. However, the empowering statute of the DOE, and in turn FERC, does not include the APA “magic words” of “on the record after opportunity for an agency hearing,” and therefore does not require hearings to be trial-type hearings on the record, but rather to be merely evidentiary hearings.²⁶² However, 42 U.S.C. § 7191(b)(1) states that where “the Secretary determines, on his own initiative . . . that no substantial issue of fact or law exists and that such rule, regulation, or order is unlikely to have a substantial impact on the Nation’s economy.” However, the nature of the rules in question here exempts them from the normal rulemaking process.

Procedural rules that govern the mode of operation of an agency are exempt to the rulemaking requirements of the APA. Procedural rules are rules that have an intra-agency

²⁶¹ David Welna, *Congress Is On Pace To Be The Least Product Ever*, NAT’L PUB. RADIO, (Dec. 24, 2013), available at: <http://www.npr.org/2013/12/24/256696665/congress-is-on-pace-to-be-the-least-productive-ever>.

²⁶² *Friends of Earth v. Reilly*, 996 F. 2d 690 (D.C. Cir. 1992).

impact.²⁶³ They have been defined as “technical regulation of the form of agency action and proceedings . . . which merely [prescribe] order and formality in the transaction of...business.”²⁶⁴

Regulations prescribing processing and submission times for an application are certainly procedural rules under this definition. Therefore DOE/FE and FERC can modify these rules quickly and implement them in short order,²⁶⁵ making for quick and effective change in the application process. The following recommendations apply to DOE/FE rules.

2. Setting A Deadline for the Filing of Motions to Intervene

10 C.F.R. § 590.303 and § 590.304(e) allow motions for interventions and protests, but does not set a specific timeframe in which these submissions must be made. The DOE/FE should set a firm date that is uniform and consistent for all applications. As discussed above, the agency set sixty days for such motions because of the novel nature of the Sabine Pass application, but failed to alter that date in subsequent applications despite the lack of novelty. The agency should set a thirty day time period in which it will accept such motions, shortening the processing time of the application.

As with the DOE/FE process, the FERC process also allows for motions of intervention and protests.²⁶⁶ And, just like the DOE/FE process, no time limit is set in the regulation, but FERC has been using the same sixty-day timeframe. It is recommended, just as above, that FERC set a specific timeframe in the regulation, and the timeframe should be thirty days in order to speed up the application process.

²⁶³ *Pickus v. United States Board of Parole*, 507 F.2d 1107 (D.C. Cir. 1974).

²⁶⁴ *Id.* at 1113-14.

²⁶⁵ Administrative Procedure Act 5 U.S.C. § 553(b)(3)(A) (requiring 30 day delayed effective date for the implementation of procedural rules).

²⁶⁶ 18 C.F.R. § 157.10.

3. Allowing An Applicant to Submit a Certification for Public Convenience and Necessity Immediately After Fulfilling Pre-filing Requirements

As discussed earlier, once the Director issues a notice that the applicant has fulfilled the pre-filing requirements, the applicant is prohibited from filing an application for a certification of public convenience and necessity until 180 days after the notice.²⁶⁷ There is no reason given in the regulations as to why an applicant must wait nearly half a year to proceed, but it is presumably to allow FERC to include the required NEPA documentation. However, it does not seem to follow that environmental considerations are taken into account when determining whether an application is in line with public convenience and necessity. Even if it does, it seems more efficient to allow an applicant to submit all the other information FERC takes into consideration when determining public convenience and necessity, so they can begin the evaluation and then take the environmental considerations into account when they are ready, instead of delaying any action for six months. Thus, it is recommended that an applicant be allowed to submit an application for public convenience and necessity immediately after the Director issues notice that pre-filing requirements have been adequately addressed.

In total, these minor changes will take eight months off the processing of an application. By enacting these changes, DOE/FE and FERC can immediately speed up the processing time of an application while subsequently begin the process of enacting more long-term substantial changes, such as testing the feasibility of a programmatic EA such as the Department of Interior's Smart from the Start program for offshore wind.²⁶⁸ Even if DOE/FE and FERC do not choose to implement more substantial changes than those recommended in this paper, the

²⁶⁷ 18 C.F.R. § 157.21(a)(2)(i).

²⁶⁸ Phil Taylor, *Interior to Speed New Offshore Wind Leasing in Mid-Atlantic*, N.Y. TIMES (Nov. 23, 2010), <http://www.nytimes.com/gwire/2010/11/23/23greenwire-interior-to-speed-new-offshore-wind-leasing-in-49108.html>.

procedural changes will help accomplish the goals of the reduction of risk for natural gas producers, buyers, and investors, as well as allow more companies to seize the current opportunity presented by the discrepancy between domestic and world natural gas prices.

Conclusion

Over the past few years, the U.S. energy outlook has shifted suddenly and unexpectedly. From projected importer of natural gas, the country is now projected to become one of the world's largest producers and, potentially, exporters.

However, the laws and regulations governing natural gas exports have not caught up to this new energy reality, and have thus stymied natural gas producers' attempts to receive authorization to export the valuable natural resource. The system, as is, is outdated and reflects a time when domestic supply was scarce, and an extensive process of weighing public interest considerations was necessary when companies sought to export natural gas. As stated above, this is no longer the case.

Furthermore, oil and gas producers have a rare, once in a generation opportunity to capitalize on an oil and gas boom akin to what this country saw at the turn of the twentieth century. Naturally, however, this window of opportunity is not indefinite. Increasing world supply, coupled with the extensive lag time between LNG export terminal commencement and completion, requires actors to move quickly in order to capitalize on this opportunity. In order to do so, the DOE/FE and FERC need to amend the procedural rules governing the applications for authorization to export natural gas and to construct LNG export facilities. The agencies can affect immediate change in this area by amending their own procedural rules, thereby avoiding any APA requirements which would substantially delay the amendments.

If DOE/FE and FERC amend these procedures pursuant to the recommendations above, the future implications could be profound. As exhibited by the DOE's own commissioned studies, scenarios with unrestricted exports provide the most economic benefit across all scenarios. It is this type of infusion of capital and revenue that, unforeseen at the beginning of the economic downturn of 2008-09, can lift the U.S. out of its economic malaise and bring it to new heights. Therefore, this paper urges DOE/FE and FERC to act quickly to seize a rare opportunity for this country and remove the procedural impediments currently protracting the process and narrowing the window of opportunity for both the companies involved and the economy and nation as a whole.