LNG TERMINALS: FUTURE OR FOLLY?

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I. INTRODUCTION

Energy policy in the United States stands at a vital crossroads. The U.S. is heavily dependent on energy as the engine to power its enormous economy. Disruptions in energy supply and significant increases in energy costs lead to adverse economic consequences such as recession and inflation.[1] Conversely, cheap energy plays a significant role in the unprecedented economic success of the U.S.[2]

The energy consumed by the U.S. has not come cheap. As the world's leading consumer of energy, the U.S. is also the greatest contributor of greenhouse gas emissions ("GHGs").[3] The scientific consensus is that the planet is undergoing highly destructive climate change and this climate change is very likely the result of GHGs emitted by human activity.[4] The worldwide economic boom of the past fifty years has released staggering amounts GHGs into the atmosphere, trapping the heat emitted by the sun and causing global

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1. Michael Baly III, Brian S. White & Christopher B. McGill, *The Impacts of Energy on the Economy*, *in* ENERGY LAW AND TRANSACTIONS § 1.02 (2005).

2. *See id.*; ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 4 (2007), *available at* http://www.eia.doe.gov/ oiaf/aeo/pdf/0383(2007).pdf [hereinafter

INFO. ADMIN., EMISSIONS OF GREENHOUSE GASSES IN THE UNITED STATES 2005 2 (2006), *available at* ftp://ftp.eia.doe.gov/pub/oiaf/1605/cdrom/ pdf/ggrpt/057305.pdf.

4. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE ("IPCC"), CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS 92-94 (2001). *Accord*, IPCC, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICY MAKERS 5 (Feb. 2007) [hereinafter *HANGE*

, NAT'L RESEARCH COUNCIL, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS 1 (2001) (cited in Petition for Writ of Certiorari at 23, *Mass. v. E.P.A.*, 127 S. Ct. 18 (2006) (No. 05-1120).

temperatures to climb.[5] According to the Intergovernmental Panel on Climate Change ("IPCC"), a trend of higher global temperatures stretching over one hundred years (with the most significant increases in the past fifty years), rises in sea level and loss of glacier and snow cover in both hemispheres demonstrate long-term effects of increased GHG emissions.[6] Immediate effects of climate change can be observed in such phenomena as "significantly increased precipitation levels" in various parts of the world coupled with significant drying observed in other regions, strengthened mid-latitude westerly winds, widespread changes in extreme temperatures, and more intense tropical cyclone activity in the North Atlantic.[7] Aside from these current impacts, the IPCC projects that continued warming in the 21st century will result in serious natural consequences, including increased heat waves, a higher incidence of more intense tropical cyclones, and rises in sea levels of up to 0.8 meters by the year 2300.[8]

If the IPCC's predictions are correct, changes in weather patterns and rising sea levels could have significant impacts on human life. Some of the potential impacts include reduction in crop levels,

been delayed, the U.S. has slowly begun to recognize its need to curb emissions of GHGs and other air pollutants. A recent article in the *Proceedings of the National Academy of Sciences* confirmed the earlier findings of the IPCC that the world is warming faster than it has in the past, and the cause of the increased speed of this warming is, in part, anthropogenic.[13] Notwithstanding some entrenched dissenters,[14] an increasing number of American politicians and scientists are expressing the position that something must be done to

an immediate and significant reduction in GHG emissions. While not a comprehensive long-term solution, shifting from coal and petroleum to natural gas would act as a stopgap measure to allow the U.S. to make major reductions in GHGs while converting to a non-hydrocarbon-dependent energy economy.

Because of its potential benefits, natural gas should become a key player in the U.S. energy market in the coming years. Yet, while demand is increasing, natural gas production in America is on a steady, permanent decline.[16] If natural gas is going to become a transition fuel for the switch to a more carbon-neutral economy, the U.S. must find other sources of natural gas since domestic reserves will not meet increasing demand. This article looks at one such source: liquefied natural gas. The purpose of this article is to track the development of U.S. policy as it affects the importation of liquefied natural gas ("LNG") and to demonstrate the propriety of a policy which favors LNG in light of the important role natural gas could play in the immediate future. Part II of this article demonstrates that natural gas is essential as a transitional energy supply. Part III shows that both current and future supplies of natural gas are insufficient to meet projected demand and considers LNG as a method of meeting this demand. Part IV provides basic information about LNG production, transportation, and distribution. Part V discusses national policies developed to encourage the development of liquefied natural gas supplies. Part VI examines common arguments presented against LNG development and responds to those criticisms. Finally, Part VII argues that existing U.S. energy policy is correct in encouraging the development of LNG importation through market-based systems. LNG is necessary as a source of natural gas supply to ensure the availability of a sufficient quantity of this important fuel during the transition to a carbon-neutral economy.

II. NATURAL GAS AS A TRANSITIONAL ENERGY SUPPLY

In order to achieve the reductions of GHGs necessary to stabilize the growth of atmospheric carbon dioxide and curb global warming, a multi-prong attack is necessary.[17] It would be absurd—and

16. ROBERT L. HIRSCH, PEAKING OF WORLD OIL PRODUCTION: IMPACTS, MITIGATION, & RISK MANAGEMENT 34 (2005) (citing CERA ADVISORY SERVICES, THE WORST IS Y

emits only 40% as much carbon dioxide as coal when burned for electricity, switching from coal to natural gas would significantly reduce GHG emissions in a relatively short period of time.

In contrast, the most aggressive efforts to increase the use of renewable energy sources would likely have only a modest impact on GHG emissions. Currently, non-hydroelectric renewables account for only 2.3% of electricity generation in the U.S.[24] The Energy Information Administration ("EIA") predicts that this share will grow to only 3.6% by 2030.[25] A recent report by the National Commission on Energy Policy has recommended that this amount be increased to 10% by 2020.[26] However, significant technological and economic

generation.[30]

Natural gas offers many advantages over other sources of electricity production. First and foremost, natural gas burns much cleaner than coal, emitting only 40% as much carbon dioxide in electricity generation.[31] Along with the reduced carbon emissions from consumption, natural gas extraction has less environmental impact than coal mining.[32]

Natural gas plants are relatively cheap to build. A recent study by the EIA accounted for all costs over the life-time of various energy projects' combined cycle (termed "levelized cost comparison").[33] The study found natural gas plants cheaper than coal, nuclear, and wind-powered electricity generation facilities.[34] Thus, natural gas enjoys substantial environmental and economic advantages over alternative fuels.

Despite these advantages, federal law prevented burning natural gas for electricity production for a period of time.[35] A natural gas shortage prompted Congress to enact regulations to conserve natural gas for industrial use, encourage production of domestic coal, and reduce dependence on foreign oil in the wake of the 1973 oil embargo.[36] Yet in a fortuitous series of events, beginning with the amendment and repeal of the Power Plant and Industrial Fuel Use Act,[37] the deregulation of the natural gas industry, and the passage of

30. Daniel Yergin & Michael Stoppard, *The Next Prize*, FOREIGN AFF., Nov.-Dec. 2003, at 103, 107.

31. *Id* at 109.

32. For example, common coal mining practices such as strip mining or the more extreme mountaintop removal completely eliminate entire ecosystems. *See*, *e.g.*, Mountain Justice Summer, The Facts, http://mountainjusticesummer.org/facts/index.php (last visited May 11, 2007) (includes information about the damage caused by mountaintop removal, a common coal mining process). *See also* Wendy B. Davis, *Out of the Black Hole: Reclaiming the Crown of King Coal*, 51 AM. U. L. REV. 905, 947 (2002) (describing environmental impacts of coal mining).

33. ENERGY INFO. ADMIN., INT'L ENERGY OUTLOOK 2006 66 (2006), *available at* http://www.eia.doe.gov/ oiaf/ieo/pdf/0484 (2006).pdf [hereinafter *IEO 2006*].

34. *Id*. *See also* Yergin & Stoppard, *supra* note 30, at 109 (describing technology "borrowed from jet engines [that] has given gas a major advantage against its competitors" due to the fact that they are "easier to finance, quicker to build, and more efficient in their consumption of energy than existing coal plants").

35. Power Plant & Industrial Fuel Act, 42 U.S.C. §§ 8301-8484 (1978), *amended by* Pub. L. No. 100-42, 101 Stat 310 (1987).

36. *See* H.R. REP. NO. 100-78 at 3-8 (1987), *reprinted in* 1987 U.S.C.C.A.N. 270, 271-277.

37. 42 USC §§ 8301-8484 (1978).

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2004 were around 0.6 Tcf and the EIA predicts that imports could rise as high as 6.4 Tcf by 2025.[84] However, demand is highly contingent upon prices, so depending upon the price and demand scenario, EIA predicts LNG imports in 2030 could be as low as 1.9 Tcf and as high as 7.4 Tcf.[85] Of course, the importation of LNG would also have an impact on natural gas prices as greater supply could help lower prices.

To accommodate the increase in LNG imports, the U.S. will need to build more gasification facilities. As of 2005, the U.S. had five operating LNG terminals, four on the eastern seaboard and one in the Gulf of Mexico. The combined peak capacity of these terminals is 1.3 Tcf per year.[86] Proposed expansions of these projects will bring their total annual capacity up to 2.1 Tcf by 2008.[87] With projected imports increasing to somewhere between 2 Tcf and 8 Tcf per year, the U.S. needs additional importation and re-gasification capacity. Furthermore, as current projections assume increased reliance on coal for electricity production over the next twenty-five years, any effort to replace coal-fired electricity with natural gas-fired capacity would result in even greater demand. With this in mind, from the perspective of LNG proponents, it is incumbent on the United States government to create a policy mechanism that encourages the responsible and efficient development of LNG import terminals.[88]

V. LNG: U.S. POLICY DEVELOPMENT

The modern era of LNG regulation began in 2002 with the Federal Energy Regulatory Commission's ("FERC") approval of the construction of an LNG Terminal in Hackberry, Louisiana.[89] The *Hackberry*

other current events, formed much of the policy that ended up in amendments made to the Natural Gas Act[91] by the Energy Policy Acts of 2005.[92] In order to understand the importance of this shift, it is necessary to understand the regulation leading up to this opinion. After a brief discussion of the treatment of LNG leading up to the modern era, the current regulatory framework for LNG will be considered and the policy implications of the existing legal and regulatory framework will be addressed.

A. Regulation of LNG in its Infancy

1. Natural Gas Act

Natural gas was originally considered a worthless byproduct ofuEDITporfNaturflIof 2005.

Lake Charles, England aboard the *Methane Pioneer*.[117] Since 1969, the U.S. has exported gas regularly to Japan from its oldest active LNG terminal located in Kenai, Alaska. However, during the early seventies, demand conditions and a two-tiered vintage pricing system which favored "new gas" over "old gas" provided ripe timing for the importation of LNG for the first time.[118]

In 1972, the Commission authorized the construction of the first LNG import terminal and approved the long-term importation of LNG from Algeria to Everett, Massachusetts.[119] This project was approved, in part, because the Commission determined that "the United States [was] running dangerously short of natural gas."[120] At first, there was some uncertainty over the appropriate policy approach to LNG terminals. LNG terminals were new components in a developed natural gas transportation and distribution system that connected interstate pipeline systems with imported natural gas. While the Commission clearly had jurisdiction under § 3 of the NGA, it was less clear whether the construction of these facilities required a Certificate of Public Convenience and Necessity under § 7 of the NGA.

Initially, the Commission authorized construction exclusively under § 3 of the NGA.[121] However, shortly after the Commission issued the authorization in *Distrigas*, the Commission changed its position.[122] Upon application for an increase in the amount of gas it could import, the Commission held that § 7 certification was required for all of Distrigas' facilities.[123] Distrigas challenged this ruling on the grounds that the Commission did not have jurisdiction over imported natural gas under *Border Pipe Line Co. v. FPC*, in which the D.C. Circuit held that the Commission did not have § 7 jurisdiction over pipelines importing gas from Mexico.[124] Rather than overturn its earlier decision, the D.C. Circuit in *Distrigas v. FPC* held that the Commission's authority under § 3 was broad enough to include § 7

117. *Id.* at 1-2.

118. McManus, *supra* note 93, at § 50.03[4][b][ii].

119. Distrigas Corp., 47 F.P.C. 752 (1972).

120. *Id*. at 761.

121. *Id.* at 756.

122. For an excellent discussion of the policy development of LNG terminal siting under FPC, and later FERC, see Knowles, *supra* note 79.

123. Distrigas Corp., 49 F.P.C. 1145 (1973).

124. 171 F.2d 149 (D.C. Cir. 1948).

requirements.[125]

In general, the Commission treated LNG import terminals like natural gas pipelines by regulating long-term contracts, requiring that services be provided pursuant to tariffs on file with the Commission, and eventually imposing open-access policies on terminals similar to those imposed on pipelines.[126] However, favorable policies and deregulation could not save LNG from market forces. After imports of LNG peaked in 1979, LNG imports suffered a drastic decline due to rapidly falling oil prices and the emergence of the natural gas "bubble," created in large part by the Natural Gas Policy Act of 1978.[127] This resulted in a glut of domestically available natural gas and, because LNG prices were tied to oil prices in most contracts, LNG became uneconomical to import.[128] As a result, most LNG import terminals were shuttered, and LNG fell into the background of energy policy development.[129]

However, due to rising demand for natural gas, LNG has enjoyed a surge in popularity in recent years. First, sections of the Powerplant and Industrial Fuel Use Act were repealed in 1987,[130] lifting restrictions on the use of natural gas in industrial boilers and in the generation of electricity, thus raising demand for LNG.[131] Additionally, the more stringent requirements on air quality imposed by the Clean Air Act Amendments of 1990[132] resulted in renewed interest in natural gas-fired power plants.[133] Finally, record demand and resulting record high prices have brought natural gas prices far above the threshold necessary to support the LNG value chain.

Although LNG imports remained consistent throughout most of

125. 495 F.2d 1057, 1062-65 (D.C. Cir. 1974).

while at the same time ensuring competitive commodity prices and an open-access interstate pipeline grid."[143] Commentator Brian O'Neill explained:

> "The end result of the Commission's new LNG terminal policy is a much more light-handed regulatory regime for new LNG terminal projects, a policy that limits authority to section 3 of the NGA. . . .
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> . . . .
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> Based on subsequent activities at the FERC approving new and expanded LNG terminal projects and as a consequence of its new LNG terminal policy, it is evident that FERC is seeking to explained: expl2187ed: explained:

("SES") proposed to build an LNG terminal at the Port of Long

valuable commodities, natural gas regulation has grown and changed as the industry has grown and changed. As the modern push toward free-market policies and deregulation has taken full effect in the natural gas industry, LNG regulation has followed suit. Recently, as discussed above, the Commission bestowed a new level of regulatory favor on LNG. It is in this climate that the Energy Policy Act of 2005 was adopted.

C. The Energy Policy Act of 2005.

1. Significant Provisions[157]

In the Energy Policy Act of 2005[158] ("Act"), Congress continued to hone national policy on the importation and development of LNG. In the Act, Congress continued the pro-development policies of deregulation that the Commission set forth in *Hackberry*. Furthermore, the significant provisions of the Act affecting LNG demonstrate that Congress sought to encourage the development of LNG through what can be termed "regulatory subsidization."

Congress first resolved the question of jurisdiction raised by California in *Sound Energy Solutions.* Congress made it clear that the Commission was the lead agency in developing onshore LNG terminals: "The Commission shall have the exclusive authority to approve or deny an application for the siting, construction, expansion, or operation of an LNG terminal."[159] The Act further solidified the Commission's role in the process by affirmatively establishing the Commission as "the lead agency for the purposes of coordinating all applicable Federal authorizations and for the purposes of complying with the National Environmental Policy Act" and by directing all other state and federal agencies involved to "cooperate with the Commission and comply with the deadlines established by the Commission."[160] However, the Act reserved to the states all authority previously exercised by the states under the Coastal Zone Management Act, the Clean Air Act, and the Federal Water Pollution

157. This analysis builds on the excellent analysis presented in ENERGY POLICY ACT OF 2005: SUMMARY AND ANALYSIS OF THE ACT'S MAJOR PROVISIONS § 1.03[3][a]-[g] (Kevin J. McIntyre, Martin V. Kirkwood & Jason F. Leif eds., 2006) [hereinafter *Summary and Analysis*].

158. Pub. L. No. 109-58, 119 Stat. 594 (2005).

159. Pub. L. No. 109-58, § 311(c) (codified at 15 U.S.C. § 717(b) (2007)).

160. *Id.* at § 313(b)(1)-(2) (codified at 15 U.S.C. § 717(n)).

early participation by all necessary and interested parties.[168] In addition, the process requires the applicant to file a series of resource reports that aid the Commission in the completion of a draft-EIS.[169] Arguably, these filing policies streamline the permitting process by assuring that all necessary components and parties are included before

applications for purposes of compliance with NEPA. Beyond this, the Act authorizes the Commission to establish a schedule for all Federal authorizations, under which the Commission "shall . . . ensure expeditious completion of all such proceedings [and] comply with applicable schedules established by Federal Law."[178] If a state or federal agency refuses to cooperate with the Commission or fails to comply with a deadline, the applicant for the LNG terminal can seek to have the D.C. Circuit compel the recalcitrant agency to act.[179] Review of any agency action other than delay or lack of cooperation can be sought in the U.S. Circuit Court of Appeals for the circuit in which the proposed facility is located.[180] The Act directs the courts to set these actions for expedited review.[181]

In order to further facilitate expeditious judicial review, the Act directs the Commission to maintain a consolidated record in cooperation with federal and state agencies for each project.[182] This consolidated record is the record for both described types of judicial review. Again, this consolidated record, along with the expedited review, serves to speed up the process of siting LNG terminals by providing a specialized, efficient dispute resolution procedure.

2. *Impact of the Energy Policy Act of 2005 on Siting of LNG Terminals*

The overarching policy objective of the Act, as contained in its preamble, is to "ensure jobs for our future with secure, affordable, and reliable energy."[183] By resolving jurisdictional issues, centralizing and streamlining the application process, reserving only an advisory role for states in safety determinations, providing an expeditious dispute resolution mechanism, and resting the ultimate decision and accountability in one federal agency, the Act facilitates the development of LNG terminals in accordance with national energy priorities. Furthermore, by adopting the *Hackberry* policies and leaving states' environmental review untouched, the Act leaves as the primary obstacles to development of LNG terminals the normal operation of a competitive market and state environmental concerns.

178. Pub. L. No. 109-58, § 313(a) (codified at 15 USC § 717n(b)-(c)).

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.* (codified at 15 USC § 717n(d)).

183. Energy Policy Act of 2005 pmbl., Pub. L. 109-58, 119 Stat. 594 (2005).

These policies have been extremely successful in eliciting applications.[184] However, it is too early to determine whether these policies will result in the actual construction and successful operation of LNG terminals.

It is possible that the current polices will not result in the importation of enough LNG to meet the growing difference between rising demand and declining domestic production. If this is the case, the policies of the Act may need to be revisited and incentives to import strengthened. Congress might continue to encourage the market-driven policies embraced by the Act and yet continue to promote LNG importation through such programs as carbon taxation or emissions trading. By forcing GHG emitters to internalize the cost of their emissions, less carbon-intensive energy sources like natural gas will become more desirable. Environmentally sensitive policies like these could build on the changes made by the 2005 Energy Policy Act to ensure that enough natural gas is available to meet current domestic needs and to help the U.S. energy economy transition away from more environmentally harmful choices.

D. From the Periphery to the Limelight

LNG, like domestic natural gas, has progressed from a peripheral energy source to one that is central to achieving a sufficient and reliable supply of energy. Like other energy sources, its desirability has fluctuated with the operation of the greater energy market, enjoying times of favor and times of indifference. Due to a rise in demand for natural gas and projections of future shortfalls, LNG is currently enjoying a period of resurgence as an important and potentially significant source for meeting the growing energy needs of the United States. Accordingly, the current U.S. energy policy has developed in recent years to favor development of LNG terminals. The Energy Policy Act of 2005 clearly shows that the federal government sees LNG as an important source for meeting future natural gas needs, and the policies enshrined in the Act should serve to facilitate a rapid expansion of LNG import capacity.

Despite this positive legal environment, LNG is not without its critics, and there is fierce opposition to the siting, construction, and operation of LNG terminals.[185] The next section will address the

184. *See* O'Neill, *supra* note 79, at § 56.02[3].

185. *See, e.g.*, Columbia Rivervision, http://www.columbiarivervision.org/ (last visited May 11, 2007); Ratepayers for Affordable, Clean Energy (RACE), http://www.lngwatch.com/

the fifty states, accounting for almost 10% of all U.S. natural gas consumption.[188] California imported 87% of this gas, and given declining production, it can only be assumed the state will have to meet more of its natural gas needs in the future through imports.[189] Were California to meet part of its future need through LNG imports, the gas not taken through the interstate pipeline would then be available at lower prices for other states that lack the capacity to import LNG.[190]

As demonstrated in Part II, natural gas is an important transitional fuel. The availability of natural gas to meet short-term increases in demand for electric power and space heating is an important component of a comprehensive carbon reduction program, moving the U.S. away from carbon-intensive energy sources and toward a renewable energy future. If the increase in energy demand is not met by utilizing natural gas, it will be met by other forms of energy production, such as nuclear and coal-powered plants. Renewables cannot yet meet the entire energy need.

This argument is a good example of why a national energy policy is important. Organizations such as LNG Watch and Community Environmental Council do not contend that the data compiled by EIA or the American Gas Association is inaccurate. Rather, they assert that local conditions do not warrant development of LNG for their communities. While local concerns are very important and should be considered in any comprehensive energy

B. Is LNG Environmentally Friendly?

When burned for electricity, natural gas emits only 40% of the carbon dioxide emitted by coal, making it the most environmentally friendly fossil fuel when combusted.[191] However, the production, transportation, and liquefaction of LNG are not part of the ordinary natural gas cycle, and therefore some of the benefits of natural gas are lost through LNG as a result of inefficiency. Opponents of LNG point to a Greenpeace study which found that venting during the processing of LNG and emissions from ships transporting LNG reduce the carbon-dioxide benefits of natural gas by a range of 18% to 40%.[192] The net result is to place total emissions from LNG-produced power approximately halfway between the emission of the newest Integrated Gasification Combined Cycle ("IGCC") coal-fired power plants and gas-fired power plants burning domestic natural gas.

Second, opponents argue that the siting of LNG terminals and related facilities has an adverse impact on the environment. LNG terminals may require dredging of river channels and disrupting sensitive fish habitats.[193] Also, the LNG terminal itself must be connected to the interstate pipeline system, which requires, in most cases, that a pipeline be built from the LNG terminal to a hub or other interconnection point. These environmental concerns also remain in the foreign countries that process and liquify natural gas for export.[194]

These arguments, however, fail to address the full scope of the national energy issue. The United States must act quickly in order to curb carbon dioxi(estic n0005 Tc0 quickly)

asphyxiate anyone within a certain distance of the spill.[202] Finally, although LNG is not flammable in its liquid form, in the event of a spill, vaporization of the gas combined with the presence an ignition source could result in a massive explosion and flame front, potentially impacting anyone within 500 to 2500 meters of the spill.[203] The safety issue is the one on which opponents to LNG become the most imaginative: images of mile-wide fireballs engulfing cities are touted as strong arguments for rejecting LNG facilities outright.[204]

Despite these risks, most major analyses of the problem indicate that the risk of a spill is small and manageable with adequate safety practices.[205] A 2004 government-funded report (the "Sandia Report") outlines the safety risks described above, but ultimately determines that the risk of such a spill happening is low.[206] Subsequent studies have generally agreed with the Sandia Report, though a recent report by the Government Accountability Office surveying existing data and experts on the risks presented by LNG accidents indicates that additional studies are needed to assure that government agencies have a full understanding of the potential risks involved in transporting LNG.[207] In general, the studies analyzing the risks agree that the primary danger to the public is from the heat effects of an LNG fire.[208]

While more study is needed, current safety practices take the

202. *Id.*

203. SANDIA NAT'L. LABS., GUIDANCE ON RISK ANALYSIS AND SAFETY IMPLICATIONS OF A LARGE LIQUEFIED NATURAL GAS (LNG)

analysis of every LNG terminal application. However, Yergin and Stoppard perhaps provide the best answer to this problem:

> A variety of risks will come from increased interdependence, but, in a growing, diversified global market, they can be managed. And they are dwarfed by the much greater risk that the United States ...

local concerns. However, it is paramount that decisions about LNG be made on the national level with national interests in mind.[231]

The states still retain their authority over important environmental regulations that effectively permit states to veto LNG applications that fail to comply with the federal environmental regimes being administered by the states. The importance of this control cannot be understated. The environmental obstacles to siting an LNG facility remain some of the most significant barriers an applicant must overcome to achieve certification. By retaining the state's authority in that process, the Act gives states a major "trump card" that assures they will feature centrally in any siting decision. In addition, states play a central role in considerations of safety and security both in the initial siting decision and in the continuing operation of the facility.

federal judge in the District of Maryland recently held local zoning laws passed to discourage LNG development to be unconstitutional under the Supremacy Clause due to the exclusive jurisdiction provisions of the Act.[233] According to the judge, "[s]tate and local governments have a clearly defined role in providing input to [FERC] during the application process . . . ."[234] This role, however, is limited to providing input on "consideration of local environmental requirements and any public opposition"[235] and other "specific [grants of] authority under certain environmental statutes."[236]

The court held that "[b]y giving 'exclusive authority' to FERC to regulate the 'siting, construction, expansion, or operation of an LNG terminal,' Congress explicitly intended to prevent states from imposing *additional* restrictions on the siting of LNG facilities." [237] After a review of the text, context, and legislative history of the Act, the court determined that the Act expressly preempted local land use regulations that imposed requirements above and beyond those mandated by the Commission.[238] This successful use of the Act by developers to thwart local parochialism is a concrete example of the Act's efficacy in encouraging the development of LNG terminals and may portend the full authority the Commission could bring to bear in future projects.

Notably, the Act does not give the Commission eminent domain powers. Therefore, where a local government owns the property subject to potential LNG development, the local body's authority over the development of LNG terminals should be much greater. This creates another area of unresolved conflict as localities could attempt to use lease or contract provisions to require considerations or protections above and beyond those the Commission may require. Such a conflict has recently come to a head in Long Beach, California, where the Board of Harbor Commissioners disapproved of and terminated negotiations over an LNG project proposed by Sound

233. AES Sparrows Point LNG, LLC v. Smith, 470 F. Supp. 2d 586 (D. Md. 2007).

234. *Id.* at 589.

235. *Id.*

236. *Id.* at 597.

237. *Id.* at 597 (emphasis in original).

238. Not to be thwarted, the county whose ordinance was struck down in *Sparrows Point* passed a new zoning regulation aimed at thwarting the Chesapeake Bay project. This time the county linked the zoning law to statewide environmental regulations in an apparent effort to bring the zoning laws within the sphere of state involvement protected under the Act. *County Officials Again Try to Sink Md. LNG Project*, GAS DAILY, Feb. 7, 2007.

Certainly renewable sources of energy are desirable above all hydrocarbon sources. Yet it is not seriously contended that development of renewable energy sources can meet all the current or future energy demands of the entire United States. In this context, increasing imports of LNG makes sense. It is necessary to meet national demands for natural gas and its environmental impacts, while existent, are justified when the impact of the otherwise additional emissions from coal power plants are taken into consideration. Furthermore, the safety implications are small and manageable using current technologies and practices, and diversification of energy sources can mitigate potential threats to national security. Finally, it is appropriate that the U.S. devote valuable time and resources to this issue because natural gas, and therefore LNG, is a necessary part of a comprehensive strategy to combat climate change.

VI. ARGUMENT AND CONCLUSION

Assuming conservative increases in natural gas demand, the U.S. does not produce enough natural gas domestically to meet its future needs, and imports from Canada and Mexico will not prove sufficient to meet needs either; the increases in natural gas-fired power plants necessary to replace dirtier coal-fired plants to produce an immediate reduction in GHG emissions only compounds this problem. Without

by reserving to the states all authority previously held under important environmental regulatory schemes.

Given the desirability of LNG and the current favorable national policies, LNG terminals should come to provide a substantial amount of natural gas supplies for the U.S. in the near future. Although they are not without problems, the benefits of providing an alternative source of clean and efficient energy outweigh the negative impacts of LNG terminals and LNG importation.

LNG is primarily an important stopgap mechanism that should provide the U.S. with a means of immediately reducing GHG emissions while developing alternative carbon-neutral energy resources. By encouraging the development of LNG as an additional source of natural gas, the United States is one step closer to climate stabilization and ultimately to achieving a carbon-neutral energy economy.