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**UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY**

Pangea LNG (North America) Holdings, LLC)
)
)

FE Docket No. 12-184-LNG

**MOTION FOR LEAVE TO INTERVENE AND PROTEST OF
THE AMERICAN PUBLIC GAS ASSOCIATION**

Pursuant to Sections 590.303 and 590.304 of the Administrative Procedures with Respect to the Import and Export of Natural Gas,¹ the American Public Gas Association (“APGA”) files this motion to intervene and protest in the above captioned proceeding. In support, APGA states the following:

I. COMMUNICATIONS

Any communications regarding this pleading or this proceeding should be addressed to:

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¹ 10 C.F. R. §§ 590.303, 590.304 (2013).

II. INTERVENTION

APGA is the national, non-profit association of publicly-owned natural gas distribution systems, with some 700 members in 36 states. Overall, there are some 950 publicly-owned systems in the United States. Publicly-owned gas systems are not-for-profit retail distribution entities that are owned by, and accountable to, the citizens they serve. They include municipal gas distribution systems, public utility districts, county districts, and other public agencies that have natural gas distribution facilities. APGA members purchase interstate natural gas transportation services, usually as captive customers of a single interstate pipeline, at rates and under terms and conditions that are regulated by the Federal Energy Regulatory Commission (“FERC”). APGA’s members are active participants in the domestic market for natural gas where they secure the supplies of natural gas to serve their end users.

On December 19, 2012, Pangea LNG (North America) Holdings, LLC (“Pangea”) filed an application in FE Docket No. 12-184-LNG seeking long-term, multi-contract authorization to export approximately 1.09 billion cubic feet per day (“Bcf/d”) of domestic natural gas as liquefied natural gas (“LNG”) by vessel (“Application”). Pangea seeks authorization to export LNG from a proposed land-based export terminal with floating components to be located near Corpus Christi, Texas to any country with which the United States does not have a Free Trade Agreement requiring the national treatment for trade in natural gas and LNG, that has or in the future develops the capacity to import LNG, and with which trade is not prohibited by U.S. law or policy (“non-FTA Nations”).

APGA has a direct and substantial interest in this proceeding that cannot be adequately represented by any other party. APGA respectfully submits that good cause exists to grant its motion to intervene.

III. PROTEST

Pangea's request for authority to export domestic LNG to non-FTA Nations is inconsistent with the public interest and should be denied. The proposed exports will increase domestic natural gas prices, burdening households and jeopardizing potential growth in the manufacturing sector, as well as the transition away from more environmentally damaging fossil fuels.

The Department of Energy Office of Fossil Energy ("DOE/FE") commissioned two studies regarding the effects of LNG exports. The first, conducted by the U.S. Energy Information Administration ("EIA"), studied the impact of LNG exports on domestic prices and concluded that the exports will increase prices, with higher volumes causing more drastic increases.² The second, conducted by NERA Economic Consulting, focused on the macroeconomic effects of LNG exports, which it found would be a net positive while at the same time confirming that LNG exports would raise domestic natural gas prices, which would burden the U.S. consumers who can least afford the increase and disadvantage domestic manufacturing.³ The DOE/FE must consider Pangea's application in the context of both of these studies, but also go beyond these studies to consider the profound tradeoffs entailed by authorizing the export of a valuable fuel sourced in the U.S. rather than supporting its use domestically.

Increased production of natural gas in the United States provides the Nation with an unprecedented opportunity to pursue energy independence and sustained economic growth

² *Effect of Increased Natural Gas Exports on Domestic Energy Markets*, U.S. Energy Information Administration (Jan. 2012) ("EIA Export Report"). As requested by the DOE/FE, the EIA Export Report considered four scenarios: (1) 6 Bcf/d phased in at a rate of 1 Bcf/d per year (low/slow scenario); (2) 6 Bcf/d phased in at a rate of 3 Bcf/d per year (low/rapid scenario); (3) 12 Bcf/d phased in at a rate of 1 Bcf/d per year (high/slow scenario); and (4) 12 Bcf/d phased in at a rate of 3 Bcf/d per year (high/rapid scenario).

³ *Macroeconomic Impacts of LNG Exports from the United States*, NERA Economic Consulting (Dec. 2012) ("NERA Study"). The merits and demerits of the NERA Study are being assessed independently by DOE/FE in a separate proceeding (77 Fed. Reg. 73627), in which APGA has submitted comments; APGA's comments here on the NERA Study are only summary in fashion and not intended to represent its complete assessment of the NERA Study.

through a manufacturing renaissance grounded in plentiful, low cost natural gas. Price increases triggered by LNG exports will jeopardize these opportunities as well as the viability of natural gas as a “bridge-fuel” in the transition away from carbon-intensive and otherwise environmentally problematic coal-fired electric generation and inhibit efforts to foster natural gas as a major transportation fuel, which is important to wean the U.S. from its historic and high-risk dependence on foreign oil.

Eventually, Pangea’s plan to export natural gas will not prove economically viable. Economically recoverable domestic natural gas may prove less robust than projected, especially given associated environmental costs and concerns regarding the long-term productivity of shale gas wells. These matters aside, foreign alternatives and U.S. LNG exports will one day erase the price arbitrage opportunity that Pangea and others seek to exploit.

A. Background

Domestic, non-conventional natural gas production has increased dramatically in a few short years, upending the business model of would-be LNG importers. More than 20 companies have applied to export domestic LNG from the contiguous United States to FTA or non-FTA Nations based on the promise of huge unconventional domestic gas reserves.⁴ The total export capacity applied for to date is 29.93 Bcf/d and 28.54 Bcf/d to FTA and non-FTA Nations, respectively.⁵ Total marketed natural gas production was approximately 66 Bcf/d in the U.S. in 2011;⁶ therefore, based on current marketed production, the total applied-for export capacity would have the effect of increasing the demand for natural gas by roughly 44%.

⁴ Summary: Long-Term Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States (as of April 2, 2013), available at: http://fossil.energy.gov/programs/gasregulation/reports/summary_lng_applications.pdf

⁵ *Id.*

⁶ EIA Export Report.

DOE/FE previously granted Pangea authority to export 1.09 Bcf/d of LNG to any nation that has, or develops, the capacity to import LNG and with which the United States has, or enters into, a Free Trade Agreement requiring national treatment for trade in natural gas (“FTA Nations”).⁷ The DOE/FE granted this authority pursuant to NGA section 3(c), which provides that applications to export shall be “deemed to be consistent with the public interest” and must be “granted without modification or delay.”⁸ Pursuant to this mandate, the DOE/FE did not have discretion to consider the serious policy implications of granting this export authority and stated that its order “should not be read to indicate DOE’s views” regarding the policy arguments raised in Pangea’s application.⁹

Despite the earlier, automatic grant of export authority, the DOE/FE has a duty to ensure that the application before it in the instant proceeding for broader export authority is not inconsistent with the public interest pursuant to NGA section 3(a).¹⁰ The “public interest analysis of export applications” should be “focused on *domestic* need for natural gas,” threats to *domestic* supply, and “other factors to the extent they are shown to be relevant.”¹¹ Relatively low and stable domestic natural gas prices make the United States attractive to manufacturers and make natural gas competitive against coal and fuel oil and viable as a transportation fuel.

APGA respectfully submits that Pangea’s proposal to export domestic LNG to non-FTA Nations is inconsistent with the public interest because it will increase domestic natural gas and electricity prices to the detriment of all consumers, inhibit this Nation’s ability to forge a path toward energy independence, and undermine sustained economic growth in key manufacturing

⁷ *Pangea LNG (North America) Holdings, LLC*, FE Docket No. 12-174-LNG, DOE/FE Order No. 3227 (2013).

⁸ 15 U.S.C. § 717b(c) (2013).

⁹ Order No. 3227 at 5.

¹⁰ 15 U.S.C. § 717b(a).

¹¹ *Sabine Pass Liquefaction, LLC*, Opinion and Order Denying Request for Review Under Section 3(c) of the Natural Gas Act, October 21, 2010, FE Docket No. 10-111-LNG (emphasis supplied).

sectors. Ultimately, exports by Pangea and others will bring about a new equilibrium between domestic and international natural gas prices, squandering the current opportunity to take full advantage of lower, non-volatile domestic natural gas prices to boost the U.S. economy.

B. LNG Exports Will Increase Domestic Natural Gas Prices

Pangea commissioned Black & Veatch Corporation to conduct a market analysis study to gauge the effect of its proposed exports on domestic natural gas prices.¹² According to the Black & Veatch Study, Pangea's proposed exports will increase domestic natural gas prices, and further exports by other companies will push prices incrementally higher.¹³ Black & Veatch's conclusions mesh with those of other studies, including the two studies commissioned by the DOE/FE, which concluded that the greater the volume of LNG exports, the more domestic natural gas prices will increase.

According to the EIA Export Report, "[l]arger export levels lead to larger domestic price increases."¹⁴ EIA also concluded that "rapid increases in export levels lead to large initial price increases," but that slower increases in export levels will, "eventually produce higher average prices during the decade between 2025 and 2035."¹⁵

Even under the "low/slow" baseline scenario in the EIA Export Report, price impacts will peak at about 14%.¹⁶ Under the low/rapid baseline scenario, EIA projects that wellhead prices will be approximately 18% higher in 2016 than they otherwise would be.¹⁷ In fact, under all of the "low" scenarios accounting for different economic and shale reserve conditions, EIA predicts

¹² Application at Appendix A, *Market Price Impact Study for LNG Exports at the South Texas LNG Export Project*, Black & Veatch Corp. (December 2012) ("Black & Veatch Study").

¹³ *Id.* at Table 2, page 4.

¹⁴ EIA Export Report at 6. As requested by the DOE/FE, the EIA Export Report considered four scenarios: (1) 6 Bcf/d phased in at a rate of 1 Bcf/d per year (low/slow scenario); (2) 6 Bcf/d phased in at a rate of 3 Bcf/d per year (low/rapid scenario); (3) 12 Bcf/d phased in at a rate of 1 Bcf/d per year (high/slow scenario); and (4) 12 Bcf/d phased in at a rate of 3 Bcf/d per year (high/rapid scenario).

¹⁵ *Id.*

¹⁶ *Id.* at 8.

¹⁷ *Id.*

price impacts well above 10% that then moderate.¹⁸ Under the “high/rapid scenario,” EIA projects that prices will increase by 36% to 54% by 2018 depending on natural gas supplies and economic growth.

The NERA Study also concluded that the higher the volume of LNG exports, the more domestic natural gas prices will rise. All three studies underestimate potential price increases, however, because they underestimate future growth in domestic demand for natural gas.

i. Domestic Demand Underestimated

The Black & Veatch Study projects greater overall increases in future domestic demand for natural gas than previous EIA reports. According to Black & Veatch, increased reliance on natural gas for electric power production will drive future growth in domestic demand for natural gas. Black & Veatch predicts that the portion of electricity in the U.S. produced from natural gas will double between 2013 and 2037.¹⁹ The Black & Veatch Study, however, still fails to account for the full extent of domestic growth in natural gas because it discounts the growth in demand from the industrial sector.

Although the EIA does not project as much total domestic demand growth for natural gas as Black & Veatch, the Early Release of the EIA’s Annual Energy Outlook for 2013 (“*AEO2013*”) projects greater increases in domestic demand for natural gas than projected in prior Annual Energy Outlooks driven by greater increases in demand for natural gas from domestic industry, particularly from the bulk chemicals and primary metals industries and as a result of “higher output in the manufacturing sector.”²⁰ However, even *AEO2013* appears to underestimate the coming growth in natural gas use for manufacturing if domestic prices remain

¹⁸ *Id.* at 9.

¹⁹ Black & Veatch Study at 17.

²⁰ *AEO2013* Early Release Overview at 2.

low.²¹ In addition, both the Black & Veatch Study and *AEO2013* fail to account for the recent strides taken to make natural gas vehicles a mainstay of American transportation.²²

In brief, Pangea fails to account for the full potential for growth in domestic demand for natural gas, which means that the exports it proposes will increase natural gas prices even more than projected by it. Exports of domestic produced LNG by Pangea and others will come at the cost of efforts to reinvigorate American manufacturing, transition power production away from coal, and wean the country from its dangerous dependence on foreign oil for transportation.

C. Effects of Higher Prices

Increases in the price of natural gas will adversely impact the very U.S. consumers who can least afford such price increases, inhibit the expansion of domestic manufacturing, and may forestall the further use of natural gas as a bridge fuel away from the carbon-intensive coal and foreign-sourced oil for transportation. The NERA Study describes the effects of LNG exports and the attendant price increases in terms of a “wealth transfer.” The DOE/FE must examine in a Pangea’s export application.

i. Hurt Economically Vulnerable Households

Proposed LNG exports would raise domestic natural gas prices, which will increase costs to households that rely on natural gas for heating and cooking. NERA projects that these higher costs will be offset by increases in the value of natural gas resources and related companies,

²¹ See Steven Mufson, *The New Boom: Shale Gas Fueling an American Industrial Revival*, Washington Post (Nov. 14 (2012) (reporting that manufacturers have plans to invest as much as \$80 billion in U.S. chemical, fertilizer, steel, aluminum, tire and plastics plants); Letter from Edward J. Markey, Ranking Member, House of Representatives Committee on Natural Resources, to Steven Chu, Secretary of Energy (Dec. 14, 2012)(“Markey Letter”) (stating that *AEO2013* domestic demand projections “fail to capture many of the more than 100 newly announced natural gas-intensive manufacturing projects that have been announced over the past 18 months. Those projects represent of \$90 billion in investment and billions of cubic feet of additional future daily natural gas use.”).

²² Jim Magill, *Shell, TravelCenters to Develop LNG Fueling Network*, Platts Gas Daily (April 16, 2013) (Reporting that Shell and TravelCenters of America have announced plans to develop a nationwide network of liquefied natural gas fueling centers for heavy-duty trucks at about 100 locations along the interstate highway system in an effort to solve the “chicken-and-egg” dilemma that has slowed the growth of natural gas as a vehicle fuel); Diane Cardwell and Clifford Krauss, *Trucking Industry Is Set to Expand Its Use of Natural Gas*, New York Times (April 23, 2013) (reporting that LNG exports could threaten growth of NGVs).

which NERA assumes many Americans own through retirement savings and other investments.²³ NERA admits, however, that “[h]ouseholds with income solely from wages or government transfers,” will not share in the benefits of increased profits from natural gas.²⁴ Therefore, the increase in natural gas prices due to exports will impact those consumers without investments or retirement savings, those living paycheck-to-paycheck or relying on government assistance - in other words, the most needy and most vulnerable in our society.

ii. Suppress Other Domestic Industries

Increased natural gas prices due to proposed LNG exports will raise natural gas and electric energy costs, which will depress both “real wages and return on capital in all other industries” besides the natural gas sector.²⁵ As the NERA study indicates:

As the price of natural gas increases, the economy demands or produces fewer goods and services. This results in lower wages and capital income for consumers. Hence, under such economic conditions, consumers save less of their income for investment.

As a result, industries that rely on natural gas will experience “a reduction in overall output,” mitigated by a “switch to fuels that are relatively cheaper.”²⁶ NERA is not concerned by any level of future price increase caused by exports, because it concludes that the “rents” obtained by LNG exporters from foreign customers and the increased profits enjoyed by natural gas producers will make up for the resulting declines in real wages and economic output. NERA predicts very modest increases in gross domestic product (“GDP”) as a result of LNG exports.²⁷

When evaluating whether Pangea’s export application is inconsistent with the public interest, the DOE/FE must ask not only “what will we gain from LNG exports,” but also “what

²³ See Markey Letter, note 19 supra, casting doubt on the assumption that benefits to the natural gas sector will be widely enjoyed by ordinary American via retirement investments.

²⁴ NERA Study at 8.

²⁵ NERA Study at 7.

²⁶ NERA Study at 53.

²⁷ NERA Study at 56.

will we give up.” For instance, the DOE/FE must look behind sterile statements that “[d]omestic industries for which natural gas is a significant component of their cost structure will experience increases in their cost of production, which will adversely impact their competitive position in a global market and harm U.S. consumers who purchase their goods,” and ask “what does that mean for the public interest.” A U.S. manufacturing renaissance that promises greater economic growth and job creation with positive effects rippling throughout the economy hangs in the balance. Right now, industry is poised to invest billions of dollars in new petrochemical plants, ethane crackers and other natural gas intensive facilities in the United States premised on the promise of low domestic natural gas prices.²⁸ But energy intensive manufacturing is the sector of the economy most vulnerable to increases in natural gas and electricity costs.²⁹ Prior economic data demonstrate that when domestic energy prices increase, the country loses manufacturing jobs, particularly in the fertilizer, plastics, chemicals, and steel industries.³⁰

Pangea’s application cites the jobs its export plans may create,³¹ but it does not consider those that will be lost or those that may never be created in the first place due to higher and more volatile natural gas prices. For example, Sasol North America, Inc. is currently considering investing in the first gas-to-liquids plant in United States, an innovative technology for producing diesel and other liquid fuels without oil, and U.S. natural gas prices are a primary consideration regarding whether the investment will go forward.³² Last year, in his State of the Union

²⁸ Press Release, Dow Chemical, *DOE Report on LNG Exports Short Changes Manufacturing and U.S. Competitiveness* (Dec. 6, 2012) available at <http://www.dow.com/news/press-releases/article/?id=6138>.

²⁹ NERA Study at 67.

³⁰ U.S. House Committee on Natural Resources Democrats, *Drill Here, Sell There, Pay More: The Painful Price of Exporting Natural Gas* (March 2012) available at <http://democrats.naturalresources.house.gov/reports/drill-here-sell-there-pay-more>.

³¹ Application at Appendix B, *The Impact of Construction and Operation of Pangea’s South Texas LNG Export Project on Business Activity in the Corpus Christi Area*, The Perryman Group (December 2012).

³² Clifford Kraus, *South African Company to Build U.S. Plant to Convert Gas to Liquids*, New York Times (Dec. 3, 2012) available at: http://www.nytimes.com/2012/12/04/business/energy-environment/sasol-plans-first-gas-to-liquids-plant-in-us.html?_r=0.

Address, President Obama spoke of “an America that attracts a new generation of high-tech manufacturing and high-paying jobs - a future where we’re in control of our own energy, and our security and prosperity aren’t so tied to unstable parts of the world,” and “an economy built on American manufacturing, American energy.”³³ Low natural gas prices in the U.S. provide the path forward.³⁴ Higher natural gas prices due to LNG exports, including those proposed by Pangea, threaten this nascent return of American manufacturing.

Rather than trading a few existing manufacturing jobs for a few natural gas and construction jobs, the DOE/FE should pursue policies that create new manufacturing jobs and broader economic growth in the U.S. Using natural gas for manufacturing provides a value-added benefit to the economy because industry multiplies the value of every dollar it expends on natural gas for energy or as a raw material. Rather than investing in natural gas exports, which squeeze out investments from other sectors of the economy, the U.S. should pursue policies that allow industry to invest in natural-gas dependent manufacturing. Energy and natural gas intensive manufacturing produces chemicals, metals, cement and other materials that may be low-value adding but create positive ripple effects up the value-chain and throughout the economy.³⁵ Rather than exporting natural gas as a raw natural resource, the U.S. could export processed materials, such as steel, or higher value-added goods at more competitive prices, with greater benefits to the U.S. job market and GDP.

³³ President Barack Obama, State of the Union Address (Jan. 24, 2012), transcript available at: <http://www.whitehouse.gov/state-of-the-union-2012>.

³⁴ See Michael Birnbaum, *European Industry Flocks to U.S. to Take Advantage of Cheaper Gas*, Washington Post (April 1, 2013).

³⁵ NERA claims that harms resulting from exports will “likely be confined to very narrow segments of industry,” namely low value-added, energy intensive manufacturing. NERA Study at 67-69. NERA, however, ignores the benefits of producing materials in the U.S. that can then be used by other U.S. manufactures that are less energy intensive and higher up the value chain. For instance, if plastics are produced at competitive prices in the U.S., toy manufacturers may find it economical to “re-shore” toy manufacturing plants. Steven Mufson, *The New Boom: Shale Gas Fueling an American Industrial Revival*, Washington Post (Nov. 14, 2012).

iii. Threaten Transition from Coal

Current low natural gas prices provide an opportunity to wean the U.S. off of carbon-intensive coal. Inflated natural gas prices due to LNG exports will decrease the viability of natural gas as a bridge-fuel to a lower carbon future. Current low prices make natural gas-fired electricity generation an economically sound alternative to coal-fired generation. Sustained low prices encourage this transition by private initiative regardless of increased environmental regulations as generators find natural gas competitive with coal. If LNG exports inflate natural gas prices, the economics turn against cleaner burning natural gas.³⁶ Fuel switching from coal to natural gas depends on commodity price competition; even modest increases in the cost of natural gas can cause electric generation companies to rely more on coal.³⁷

In addition, new environmental regulations will soon force coal-fired generator retirements and prevent the development of new plants. Future greenhouse gas regulation could cause additional retirements in the future. These forced retirements will soon limit the options of electric generation companies. If natural gas prices remain low, the U.S. may be able to transition away from carbon intensive coal without causing electricity prices to increase significantly. If natural gas prices are high, however, electricity prices will spike as relatively cheap coal-fired generators are forced to retire for regulatory reasons. Spiking electricity rates would have adverse rippling effects on the U.S. economy, especially for energy intensive, cost-sensitive manufacturing.

iv. Keep the U.S. Dependent on Foreign Oil

Currently, the U.S. imports billions of dollars worth of oil from around the globe, a great deal of which is used for gasoline to fuel vehicles. The replacement of current gasoline-powered

³⁶ EIA Export Report at 17.

³⁷ See Bill Holland, *US Gas-to-Coal Switch Started in February as Gas Prices Climbed: EIA*, Platts Gas Daily (April 23, 2013).

fleets with natural gas vehicles would significantly reduce U.S. dependence on foreign oil, and thereby enhance U.S. security and strategic interests and reduce our trade deficit.³⁸ Businesses are expending substantial resources today to put the needed infrastructure in place for automobiles and 18-wheelers.³⁹ Cars and trucks are not the only modes of transportation that businesses are interested in transitioning to natural gas; for example, a company in Canada is investing in commercial locomotives powered by LNG and teaming up with Caterpillar to employ similar technology in heavy duty equipment that currently runs on diesel.⁴⁰ If the DOE/FE approves Pangea's export application along with others, the resulting increase in natural gas prices would undermine recent investments to expand natural gas as a transportation fuel.

Low natural gas prices make efforts to resuscitate American manufacturing and to transition away from coal and foreign oil economically viable. LNG exports will drive up domestic natural gas prices, thereby undermining these national priorities. The DOE/FE should not pursue an unpopular⁴¹ export policy that undermines the efficient, domestic use of a domestic fuel stock and America's first and best opportunity to move toward energy independence by decreasing reliance on foreign oil.

D. U.S. and Foreign Natural Gas Prices Will Converge

Pangea's export plans likely will prove uneconomical. Currently, there are significant disparities between domestic natural gas commodity prices and prices in some nations that rely on LNG imports. These disparities provide would-be exporters with appealing arbitrage opportunities in the short-term, but they will not last. Gas rich shale deposits are a global

³⁸ Pangea claims that its proposed exports will benefit the U.S. balance of trade, but it does not consider the benefits to the trade balance of cutting oil imports and exporting value-added goods manufactured in the U.S. with affordable natural gas.

³⁹ Diane Cardwell and Clifford Krauss, *Trucking Industry Is Set to Expand Its Use of Natural Gas*, New York Times (April 23, 2013) (reporting that LNG exports could threaten growth of NGVs).

⁴⁰ Rodney White, *Firm on Track to Build LNG-Fueled Locomotive*, Platts Gas Daily (Nov. 28, 2012).

⁴¹ Rodney White, *Most Americans Oppose US Gas Exports, Split on Fracking in New Poll*, Platts Gas Daily, (April 16, 2013).

phenomenon that is just now beginning to be tapped. Also, despite relatively low domestic natural gas prices, certain countries, such as Qatar, can produce massive quantities of natural gas at even lower prices. As other nations develop their resources and export capacity and as U.S. natural gas prices increase due to the very exports Pangea proposes, international and domestic prices will converge, leaving the U.S. with the worst of all worlds, i.e., higher domestic prices that thwart energy independence and that undermine the competitiveness of the manufacturing sector that relies heavily on natural gas as a process fuel.

Shale gas formations are not isolated to the United States – this is not a U.S. phenomenon; it is a world-wide phenomenon.⁴² The State Department launched the Global Shale Gas Initiative (“GSGI”) in April 2010 in order to help countries identify and develop their unconventional natural gas resources.⁴³ To date, partnerships under GSGI have been announced with China, Jordan, India, and Poland.⁴⁴ The big energy players, including ExxonMobil, Chevron, Shell, BP, etc. are spending billions of dollars world-wide to pursue shale gas plays, a

⁴² E.g., Dallas Parker, *Shale Gas: Global Game Changer*, Oil and Gas Financial Journal (Feb. 8, 2011); Vello A. Kuuskra and Scott A. Stevens, *Worldwide Gas Shales and Unconventional Gas: A Status Report*, (“The final segment of this ‘paradigm shift’ - - the worldwide pursuit of gas shales and unconventional gas - - has only just begun, with Australia, China and Europe in the lead. Europe’s gas shale geology is challenging, but its resource endowment and potential are large.”) available at: <http://www.rpsea.org/attachments/articles/239/KuuskraaHandoutPaperExpandedPresentWorldwideGasShalesPresentation.pdf>. Debajyoti Chakraborty, *Asia’s First Shale Gas Pool Found Near Durgapur*, Times of India Online, (January 26, 2011); Hillary Heuler, *Shale Gas in Poland Sparks Hope of Wealth, Energy Security*, Voice of America Online (June 11, 2011) (Reporting on efforts by U.S. and other western gas companies to develop gas from shale deposits); Mark Summor, *The Shale Gas Run Spreads Worldwide*, IPS, Deccan Herald (Aug. 1, 2011) (“Recent discoveries of deeply buried oil shale layers containing natural gas or oil are being reported in Australia, Canada, Venezuela, Russia, Ukraine, Poland, France, India, China, North Africa and the Middle East. Taken together, say some energy analysts, these ‘plays’ could become a game-changer, making Australia and Canada into new Saudi Arabias”).

⁴³ See <http://www.state.gov/s/ciea/gsgi/>.

⁴⁴ *Id.* see also, Rakteem Katakey, *India Signs Accord with US to Assess Shale-Gas Reserves*, Bloomberg News (November 8, 2010) (The US signed a memorandum of understanding with India to help it assess its shale gas reserves and prepare for its first shale gas auction at the end of this year.); Kate Andersen Brower and Catherine Dodge, *Obama Says US, Poland Will Cooperate on Economy, Energy*, Bloomberg News (May 28, 2011). (Reporting on President Obama’s pledge to share U.S. shale gas extraction expertise and technology on a recent trip to Warsaw); see also, *Energy in Poland: Fracking Heaven*, The Economist (June 23, 2011).

development that could eventually make producers out of potential customers for U.S. LNG.⁴⁵

For instance, the United Kingdom, sometimes cited as a potential customer for U.S. LNG, recently approved hydraulic fracturing to explore its own shale formations.⁴⁶

In addition, recent developments indicate that Japan, currently the world's leading importer of LNG and a likely target market for Pangea and other would be exporters, may be tantalizingly close to commercially developing natural gas from methane hydrates.⁴⁷ In March of this year, Japanese authorities announced that a research vessel successfully extracted natural gas from offshore deposits of methane hydrate for the first time. Japan hopes to make the extraction technology commercially viable in approximately five years. The carbon stored in global methane hydrate reserves dwarfs the amount stored in global shale gas deposits and other fossil fuel reserves. It is estimated that offshore methane hydrate deposits near Japan could provide over 100 years of natural gas supply to that country.⁴⁸

The United States is at the forefront technologically of the development of shale gas reserves. A recent study by MIT concludes that the U.S. should export its technology and expertise.⁴⁹ According to MIT, the development of international non-conventional natural gas reserves will create a more liquid market with less disparity between prices around the globe.⁵⁰

The U.S. should follow this strategy, instead of spending billions of dollars to build facilities in order to export a commodity that will possibly be abundant world-wide before the LNG export facilities can even be completed.

⁴⁵ Ken Silverstein, *Big Oil Betting on Shale Gas*, EnergyBiz (July 31, 2011).

⁴⁶ Stanley Reed, *Britain Approves Fracking for Shale Gas Exploration*, New York Times (Dec. 13, 2012).

⁴⁷ Hiroko Tabuchi, *An Energy Coup for Japan: 'Flammable Ice'*, New York Times (March 12, 2013).

⁴⁸ *Id.*

⁴⁹ MIT Energy Initiative, *The Future of Natural Gas*, at 14 (2011).

⁵⁰ *Id.*

The U.S. is not alone in developing LNG export capacity; investors in Australia hope to overtake Qatar as the world's largest exporter of LNG.⁵¹ Qatar meanwhile has a moratorium on further developing its vast reserves of natural gas; natural gas is largely a by-product of liquids production in Qatar and sells for far less than even today's U.S. prices.⁵² According to the NERA Study, U.S. LNG exports are vulnerable to increases in natural gas production and export capacity from Qatar, which could singlehandedly reduce foreign natural gas prices enough to make U.S. exports uncompetitive.⁵³

Pangea knows there are limits on the profitability of exporting LNG. The Black & Veatch Study estimates that the United States and Canada will only export a combined 9 or so Bcf/d before the economics turn against exports, and this projection tends to conform to the limits in export profitability found in the NERA Study. If the DOE/FE approves anywhere close to the 28.54 Bcf/d in pending export applications to Non-FTA Nations, it will set off an export boom that will likely result shortly thereafter in a bust. Pangea is willing to gamble that its proposed export facility will be one of the winners among dozens of similar projects in the U.S., but the DOE/FE should hesitate before approving an export plan that will drive up domestic natural gas prices (with attendant negative effects on national security and prosperity) and then likely fail to remain profitable.

Far more troubling than the prospect of international developments possibly lowering natural gas prices in importing countries or a boom and bust cycle in the development of LNG export facilities, is that fact that as the U.S. exports LNG, those exports will raise domestic prices

⁵¹ Ross Kelly, *Strong Australian dollar to help build cheap LNG export terminals, says Origin Energy CEO*, The Australian (April 28, 2011) available at <http://www.theaustralian.com.au/business/mining-energy/strong-australian-dollar-to-help-build-cheap-lng-export-terminals-says-origin-energy-ceo/story-e6frg9ef-1226046219296>.

⁵² *Evaluating the Prospects for Increased Exports of Liquefied Natural Gas from the United States*, Brookings Institution, at 23 (January 2012) ("Brookings Report").

⁵³ NERA Study at 34.

as they lower foreign prices, bringing international prices to a new equilibrium. NERA acknowledges that domestic and international natural gas prices will tend to converge toward a global LNG price, just as they have for global oil prices,⁵⁴ but the NERA Study assumes that Henry Hub prices will always remain lower than prices in consuming nations.⁵⁵ It is unclear, however, how domestic prices will avoid total convergence and remain lower than international prices without DOE imposed limits on exports. Without a DOE imposed limit, domestic and foreign natural gas commodity prices will converge, squandering the current opportunity to foster renewed U.S. manufacturing through competitive natural gas, energy, and processed materials costs.

The U.S. has an opportunity not even imagined 3 or 4 years ago to significantly expand its manufacturing sector, to transition away from our reliance on coal-fired electricity generation without attendant price shocks, and to make real progress towards energy independence. All of this, however, depends on relatively low and stable natural gas prices. DOE/FE should not turn a blind eye and allow the same businesses that gambled and lost on projections of the need for future natural gas imports to now potentially squander our Nation's future on what may well turn out to be another failed venture as natural gas production and export capacity develop throughout the world.

IV. CONCLUSION

WHEREFORE, based on the foregoing, APGA respectfully requests that the DOE/FE (1) grant its motion to intervene in this proceeding with all rights appurtenant to that status, and (2) deny, as inconsistent with the public interest, Pangea's application for export authority to non-FTA Nations.

⁵⁴ NERA Study at 111.

⁵⁵ NERA Study at 12.

Respectfully submitted,

AMERICAN PUBLIC GAS ASSOCIATION

By William T. Miller

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Washington, DC 20005

Its Attorneys

April 29, 2013

UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

Pangea LNG (North America) Holdings, LLC

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)
)

FE Docket No. 12-184-LNG

CERTIFIED STATEMENT OF AUTHORIZED REPRESENTATIVE

Pursuant to 10 C.F.R. § 590.103(b) (2013), I, William T. Miller, hereby certify that I am a duly authorized representative of the American Public Gas Association, and that I am authorized to sign and file with the Department of Energy, Office of Fossil Energy, on behalf of the American Public Gas Association, the foregoing document and in the above-captioned proceeding.

Dated at Washington, D.C., this 29th day of April, 2013.

William T. Miller

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UNITED STATES OF AMERICA
BEFORE THE
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

Pangea LNG (North America) Holdings, LLC

FE Docket No. 12-184-LNG

VERIFICATION

WASHINGTON

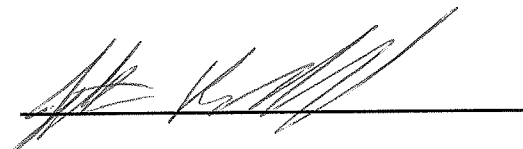
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DISTRICT OF COLUMBIA


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Pursuant to 10 C.F.R. § 590.103(b) (2013), Justin R. Cockrell, being duly sworn, affirms that he is authorized to execute this verification, that he has read the foregoing document, and that all facts stated herein are true and correct to the best of his knowledge, information, and belief.

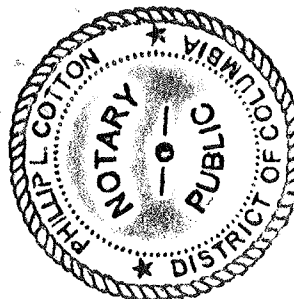


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Subscribed and sworn to before me this 29th day of April 2013.


Notary Public

My Commission Expires: 08-14-2014



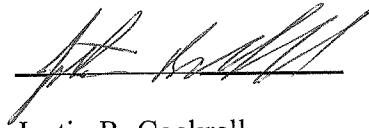
PHILLIP L. COTTON
Notary Public - District of Columbia
My Commission Expires 08/14/2014

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon on the applicant and on DOE/FE for inclusion in the FE docket in the proceeding in accordance with 10 C.F.R. § 590.107(b) (2013).

Dated at Washington, D.C., this 29th day of April, 2013.

By:

A handwritten signature in black ink, appearing to read 'Justin R. Cockrell', is written over a horizontal line.

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