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

Emera CNG, LLC	)	FE Docket No. 13-157-CNG
	)	
	)	

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

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[1] 10 C.F.R. §§ 590.303, 590.304 (2012).

II. INTERVENTION

APGA is the national, non-profit association of publicly-owned natural gas distribution systems, with over 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 November 20, 2013, Emera CNG, LLC ("Emera") filed an application[2] in FE Docket No. 13-157-CNG seeking long-term authorization to export approximately 9.125 billion cubic feet ("Bcf") per year of domestic natural gas as compressed natural gas ("CNG") by ocean-going carrier to "(1) any country with which the United States currently has, or in the future may enter into, a free trade agreement ("FTA") requiring national treatment for trade in natural gas and (2) any country with which the United States does not have a FTA requiring national treatment for trade in natural gas, which currently has or in the future develops the capacity to import CNG and with which trade is not prohibited by United States law or policy."[3] Emera's Application

[2] Application of Emera CNG, LLC for Long-Term, Multi-Contract Authorization To Export Compressed Natural Gas, Docket No. 13-157-CNG (Nov. 20, 2013) ("Application").

[3] Application at 1.

seeks authorization to export LNG from a planned natural gas compression and loading facility to be located within the Port of Palm Beach, Florida.[4]

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

Emera's request for authority to export domestic CNG to non-FTA Nations is inconsistent with the public interest and should be denied. The proposed exports from the proposed compression and loading facility in the Port of Palm Beach, Florida will increase domestic natural gas prices, burdening households and jeopardizing potential growth in the U.S. manufacturing sector, as well as the Nation's transition away from more environmentally damaging fossil fuels.

In support of its Application, Emera relies on the two studies commissioned by the Department of Energy Office of Fossil Energy ("DOE/FE") regarding the effects of liquefied natural gas ("LNG") exports.[5] 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.[6] 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

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[4] *Id*.

[5] Application at 9-11.

[6] *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).

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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.[7] The DOE/FE must consider Emera's application in the context of both of these studies, but also go beyond these studies to consider the profound tradeoffs entailed by exporting an increasingly valuable U.S. fuel rather than supporting and enhancing its use domestically.

While the existing studies already demonstrate that natural gas exports – whether they be in the form of LNG or CNG – are not in the public interest, the DOE/FE must also consider whether the studies performed to date – even if considered in the light most favorable to natural gas export applicants – provide the agency with a sufficiently reliable record upon which to approve any further natural gas export applications to non-FTA Nations. On May 29, 2014, the DOE/FE requested that the EIA update its study of LNG exports to include "lower-48 [LNG] exports of 12 billion standard cubic feet per day (Bcf/d), 16 Bcf/d, and 20 Bcf/d phased in at a rate of 2 Bcf/d starting in 2015."[8] The DOE also requested that the EIA update its modeling analysis to include *Annual Energy Outlook 2014* (*AEO 2014*) data as its starting point.[9] The DOE/FE request constitutes clear understanding and admission that the existing studies, which were based on *AEO 2011* data and only modeled export levels of 6 Bcf/d and 12 Bcf/d, no longer provide a reliable record that permits DOE/FE to determine whether a natural gas export application is in the public interest. Consideration of the subject application should therefore be suspended until those studies are completed.

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7 *Macroeconomic Impacts of LNG Exports from the United States*, NERA Economic Consulting (Dec. 2012) ("NERA Study").

8 Department of Energy, Request for an Update of EIA's January 2012 Study of Liquefied Natural Gas Export Scenarios, May 29, 2014 *available at* http://energy.gov/sites/prod/files/2014/05/f16/Request%20for%20Updated%20EIA%20Study.pdf.

9 *Id.* at 1.

APGA has long advocated that the data and assumptions upon which natural gas applications were being approved was stale given the pace of recent developments in natural gas markets. For example, a 2013 EIA study revealed that, by the end of 2014, U.S. natural gas companies planned to nearly double the amount natural gas export capacity from U.S. markets to serve rapidly growing demand in Mexico.[10] Clearly, studies performed in 2012 based on 2011 data could not fully capture the effects of such recent developments and their meaning for increased natural gas exports to non-FTA Nations. APGA submits that under these circumstances, the prudent course of action for DOE/FE is to suspend any further natural gas export approvals to non-FTA Nations until the updated EIA study is completed. Once completed, the updated EIA study will give the DOE/FE a more accurate and complete record from which to make an informed decision about whether any additional natural gas exports to non-FTA Nations are in the public interest.

Increased production of natural gas in the United States provides the Nation with an unprecedented opportunity to pursue energy independence and sustained economic growth through a manufacturing renaissance grounded in plentiful, low cost natural gas. Price increases will also jeopardize 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, Emera's plan to export natural gas will not prove economically viable. Economically recoverable domestic natural gas may prove less robust than projected, especially

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[10] U.S. Energy Information Administration, Today in Energy, U.S. Natural Gas Export to Mexico Reach Record High in 2012 (March 13, 2013) ("Several U.S. pipeline export projects that could support additional natural gas exports to Mexico have been announced. According to company announcements, these projects are expected to be completed by the end of 2014 and, if they are all built, could add up to 3.5 Bcf/d of additional export capacity to Mexico, doubling existing capacity.") *available at* http://www.eia.gov/todayinenergy/detail.cfm?id=10351.

given associated environmental costs and concerns regarding the long-term productivity of shale gas wells. These matters aside, foreign alternatives will soon remove the price arbitrage opportunity that Emera (and others) seek to take advantage of, as natural gas reserves from shale formations and export capacity expand around the world.

A. Background

As of July 31, 2014, the DOE had received 43 applications 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.[11] This is in addition to applications such as Emera's that seek authorization to export domestic natural gas as CNG. The total LNG export capacity applied for to date is 40.40 Bcf/d and 36.02 Bcf/d to FTA and non-FTA Nations, respectively.[12] Total marketed natural gas production was approximately 66 Bcf/d in the U.S. in 2011;[13] therefore, all else being equal, based on recent marketed production, the total applied-for export capacity would have the effect of increasing the daily demand for natural gas by roughly 58%.

Emera's application seeks authorization to export domestic natural gas to both FTA Nation and non-FTA Nations. NGA section 3(c) provides that applications to export to FTA Nations shall be "deemed to be consistent with the public interest" and must be "granted without modification or delay."[14] The DOE/FE, however, has a duty to ensure that Emera's application for export authority to non-FTA Nations is not inconsistent with the public interest pursuant to NGA section 3(a).[15] The "public interest analysis of export applications" should be "focused on

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11 Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States (as of July 31, 2014) *available at* http://energy.gov/sites/prod/files/2014/08/f18/Summary%20of%20LNG%20Export%20Applications.pdf.

12 *Id.*

13 EIA Export Report at 1.

14 15 U.S.C. § 717b(c) (2012).

15 15 U.S.C. § 717b(a).

domestic need for natural gas," threats to *domestic* supply, and "other factors to the extent they are shown to be relevant."[16] 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 Emera's proposal to export domestic CNG 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 sectors. Ultimately, natural gas exports by Emera 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 domestic natural gas prices to boost the U.S. economy.

As discussed herein, the previously issued DOE FE studies, as well as new EIA information, evidence the fact that exporting natural gas will affect the domestic economy in ways that are not in the public interest, including increased domestic natural gas prices which burden households, jeopardize potential growth in the U.S. manufacturing sector, and impede the Nation's goal of transitioning away from more environmentally damaging fossil fuels. APGA requests that DOE/FE consider Emera's Application in full light of these factors and consider the likely impacts of continued, large-scale natural gas export authorization, the effects of which APGA details herein and which demonstrate that Emera's request for authorization to export domestic CNG to non-FTA Nations is not in the public interest. At some point, DOE/FE must exercise restraint and either reject a natural gas export application or place prudent limits and

[16] *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.

conditions on such exports to mitigate the potential domestic harm that these exports will likely inflict on the U.S. economy.

B. LNG Exports Will Increase Domestic Natural Gas Prices

The EIA Export Report concludes that "[l]arger export levels lead to larger domestic price increases."[17] This report 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."[18] Even under the "low/slow" baseline scenario in the EIA Export Report, price impacts will peak at about 14%.[19] Under the low/rapid baseline scenario, EIA projects that wellhead prices will be approximately 18% higher in 2016 than they otherwise would be.[20] In fact, under all of the "low" scenarios accounting for different economic and shale reserve conditions, EIA predicts price impacts well above 10% that then moderate.[21] 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.[22] DOE/FE should also consider the fact that these studies underestimate potential price increases because they are based on outdated projections of domestic demand for natural gas and the questionable assumption that the demand for natural gas is sufficiently elastic to prevent significant price spikes.

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[17] 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).

[18] *Id.*

[19] *Id.* at 8.

[20] *Id.*

[21] *Id.* at 9.

[22] NERA Study at 2.

i. Domestic Demand Underestimated

In April of 2014, the EIA issued its *AEO 2014*. *AEO 2014* projects greater increases in domestic demand for natural gas than projected in prior Annual Energy Outlooks. In particular, *AEO 2014* projects greater increases in demand for natural gas from domestic industry, which the *AEO 2014* reference case predicts will increase "from 8.7 quadrillion British thermal units (Btu) in 2012 to 10.6 quadrillion Btu in 2025…."[23] However, even *AEO 2014* may underestimate the coming growth in natural gas use for manufacturing if domestic prices remain low.[24]

AEO 2014 also projects greater increases in future reliance on natural gas for electric generation than projected by the EIA in previous Annual Energy Outlooks and notes that "[i]f additional existing coal-fired and nuclear generating capacity were retired, natural gas-fired generation could grow more quickly to fill the void."[25] The *AEO 2014* projection of increased reliance on natural gas for electric generation is premised in part on low natural gas prices, but also on implementation of the Environmental Protection Agency's Mercury Air Toxic Standards ("MATS"), which will force the retirement of a number of coal-fired generators. A recent EIA study found that 8% of all U.S. coal-fired generation capacity is likely to retire in response to

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[23] EIA, *Annual Energy Outlook 2014* at ES-3 (April 2014) *available at* http://www.eia.gov/forecasts/aeo/pdf/0383(2014).pdf (last visited May 19, 2014).

[24] *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 *AEO 2013* 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.").

[25] *AEO 2014* at ES-4.

MATS, with an additional 16% of coal-fired capacity under consideration as to whether to be retired or retrofitted.[26]

Both studies commissioned by DOE/FE rely on projected natural gas demand from *AEO 2011*. These outdated projections fail to account for current EIA expectations regarding future demand and tend to overestimate demand elasticity, specifically the ability of certain natural gas consumers, such as electric generation users, to curtail their purchases in response to higher prices. Once a coal plant is retired due to MATS, or for any other reason, the operator of the retired plant cannot simply flip a switch in response to higher natural gas costs. Meanwhile, the EPA's new greenhouse gas standards for new electric generators virtually ensure that new coal plants will not be constructed to replace those that are retired.[27] Electric generation customers will soon not only demand more gas but rely on it more heavily for base and intermediate load production, altering expectations about demand elasticity that prognosticators have relied on when assuming that natural gas prices will not rise sharply due to LNG exports.[28] This same trend would also mean that the increases in the price of electricity caused by LNG exports that are projected by the EIA and NERA are very much understated.

While demand elasticity will shrink in the electric sector, meaning that LNG exports would cause sharper increases in natural gas and electricity prices than previously forecasted, most manufacturers will continue to be "responsive" to increases in the price of natural gas - meaning that manufacturers will curtail consumption and hence production due to higher prices.

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[26] U.S. Energy Information Administration, Today in Energy, Coal Fired Power Plant Operators Consider Emissions Compliance Strategies (March 28, 2014) *available at* http://www.eia.gov/todayinenergy/detail.cfm?id=15611#.

[27] "Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units" 77 C.F.R. 22392 (Apr. 13, 2012).

[28] *See* U.S. Energy Information Administration, *Fuel Competition in Power Generation and Elasticities of Substitution* (June 2012) (general description of fuel switching and price elasticity among fuels in the power generation sector) *available at* http://www.eia.gov/analysis/studies/fuelelasticities/pdf/eia-fuelelasticities.pdf.

DOE/FE needs to examine what this means for the economy and the broader public interest of the Nation in its consideration of this and other LNG export applications.

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 granular fashion what this wealth transfer would entail for the public interest when evaluating LNG export applications.

i. Hurt Economically Vulnerable Households

Proposed natural gas 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, which NERA assumes many Americans own through retirement savings and other investments.[29] 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.[30] 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.

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[29] *See* Markey Letter, note 26 *supra*, casting doubt on the assumption that benefits to the natural gas sector will be widely enjoyed by ordinary Americans via retirement investments.

[30] NERA Study at 8.

ii. Suppress Other Domestic Industries

Increased natural gas prices due to proposed natural gas 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.[31] 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."[32]

The NERA Study also identifies several industries that will be adversely affected by increased natural gas prices. For example, chemical manufacturing, as one of the natural gas and energy intensive industries that will be among the most severely disadvantaged due to natural gas price increases caused by natural gas exports.[33] According to NERA "[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."[34] Leaders in the chemical sector have voiced concern regarding natural gas exports and adverse impacts on the industry caused by inflated natural gas prices.[35] In *AEO 2014*, the EIA now projects that growth from bulk chemicals will slow after 2030 "as domestic natural gas becomes less cost-advantaged compared

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[31] *Id.* at 7.

[32] *Id.* at 53.

[33] *Id.* at 64.

[34] *Id.* at 13.

[35] 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

with prices at other locations, resulting in increased competition from newer facilities that are developed abroad."[36]

Any job creation that would be spurred by Emera's CNG export plan must be weighed against those jobs that will be lost or those that may never be created in the first place due to higher natural gas prices. When evaluating whether Emera's export application is inconsistent with the public interest, the DOE/FE must therefore consider not only what will we gain from natural gas exports, but also what will we give up. A U.S. manufacturing renaissance that promises greater economic growth and job creation with positive effects rippling throughout the economy hangs in the balance. Over the past several years, industry has shown a willingness to invest billions of dollars in new natural gas intensive facilities in the United States premised on the continuation of low, non-volatile domestic natural gas prices. For example, when Sasol North America, Inc. considered investing in the first gas-to-liquids plant in United States, an innovative technology for producing diesel and other liquid fuels without oil, U.S. natural gas prices were a primary consideration regarding whether to make that investment.[37]

In his January 2012 State of the Union 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."[38] Low natural gas prices in the U.S. provide the path forward. Higher natural gas prices due to natural gas exports, including those proposed by Emera, threaten this nascent return to American

[36] *AEO 2014* at ES-3.

[37] 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.

[38] President Barack Obama, State of the Union Address (Jan. 24, 2012), transcript *available at* http://www.whitehouse.gov/state-of-the-union-2012.

manufacturing, and prior economic data demonstrate that when domestic energy prices increase, the country loses manufacturing jobs, particularly in the fertilizer, plastics, chemicals, and steel industries.[39]

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. 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.[40] 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.

iii. <u>Threaten Transition from Coal</u>

Current low natural gas prices provide an opportunity to wean the U.S. off of carbon-intensive coal. Inflated natural gas prices due to CNG and LNG exports will decrease the viability of natural gas as a bridge-fuel to a lower carbon future. Current low prices make natural

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[39] 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.

[40] 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).

gas-fired electricity generation an economically sound alternative to coal-fired generation. Sustained low prices may encourage this transition by private initiative regardless of increased environmental regulations as generators find natural gas competitive with coal. If CNG and LNG exports inflate natural gas prices, the economics turn against cleaner burning natural gas.[41]

In addition, as discussed above, new environmental regulations will soon force coal retirements. Future greenhouse gas regulation could cause additional retirements in the future. 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 will have adverse rippling effects on the U.S. economy, especially energy intensive, cost-sensitive manufacturing.

iv. <u>Keep the U.S. Dependent on Foreign Oil</u>

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 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. State governments and businesses are expending substantial resources today to put the needed infrastructure in place.[42] Automobiles are not the only modes of transportation that businesses

[41] EIA Export Report at 17.

[42] Officials are planning a series of compressed natural gas ("CNG") filling pumps at existing filling stations across the Pennsylvania US Route 6, stretching 400 miles from New York State near Milford, Pike County, Pa. in the east and through Crawford County, Pa. to the Ohio state line on the west, known as "PA Route 6 CNG Corridor;" at the same time, Chesapeake Energy is converting its vehicles in northeastern Pennsylvania to CNG and working with a local convenience-store chain and transit authority to foster further CNG integration. Eric Hrin, *Pennsylvania Looks to CNG*, The Daily Review Online (May 26, 2011) *available at* http://thedailyreview.com/news/pennsylvania-looks-to-cng-1.1135267; *see also*, Texas S.B. 20 (On July 15, 2011, the governor of Texas signed S.B. 20, supporting a network of natural gas-refueling stations along the Texas Triangle between Dallas/Ft. Worth, San Antonio, and Houston. The new legislation will lay a foundation

are interested in transitioning to natural gas; 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.[43] If the DOE/FE approves Emera'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 and non-volatile 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 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.[44]

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

Emera'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 CNG or 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 phenomenon that is just now beginning to be tapped.[45] Also, despite relatively low domestic

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for wider-scale deployment of heavy-duty, mid- and light-duty natural gas vehicles ("NGVs") in the Texas market).

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

[44] On the subject of price sensitivity, DOE/FE should take note of the fact that this past winter, due to spiking gas prices, fuel oil became the fuel of choice in the Northeast electric generation market on the basis of price (see April 1, 2014 Presentation of Peter Brandien, ISO New England, at the FERC in Docket No. AD14-8). *See* Issuance 20140403-4002.

[45] The pace of shale development abroad will certainly increase in light of the lesson driven home by the recent Ukraine crisis, in which Russia, on which most of Europe depends for significant natural gas imports, has shown its willingness to threaten higher natural gas prices or even embargo in order to achieve its geopolitical ends. *See* Griff Witte and Anthony Faiola, *Amid Showdown With Energy-rich Russia, Calls Rise In Europe To Start Fracking*, Wash. Post, April 7, 2014 *available at* http://www.washingtonpost.com/world/amid-showdown-with-

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 Emera 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 unique to the United States – this is not a U.S. phenomenon; it is a world-wide phenomenon.[46] 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.[47] To date, partnerships under GSGI have been announced with China, Jordan, India, and Poland.[48] The big energy players, including ExxonMobil, Chevron, Shell, BP, etc., are spending billions of dollars world-wide to pursue shale gas plays, a development that could eventually make producers out of potential customers for U.S. CNG and

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energy-rich-russia-calls-rise-in-europe-to-start-fracking/2014/04/07/f3616058-2c24-4683-abe3-728a5572debf_story.html.

[46] *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").

[47] *See* http://www.state.gov/s/ciea/gsgi/.

[48] *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 asses 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).

LNG.[49] For instance, the United Kingdom, sometimes cited as a potential customer for U.S. LNG, has approved hydraulic fracturing to explore its own shale formations.[50]

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.[51] 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.[52]

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

The U.S. is not alone in developing natural gas export capacity; investors in Australia hope to overtake Qatar as the world's largest exporter of LNG.[53] 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.[54] 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.[55]

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[49] Ken Silverstein, *Big Oil Betting on Shale Gas,* Energy Biz (July 31, 2011).

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

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

[52] *Id.*

[53] 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.

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

[55] NERA Study at 34. It should also be kept in mind that Qatar is reportedly the banker for such terrorist groups as Hamas (see, for example, articles at https://www.google.com/?gws_rd=ssl#q=is+qatar+a+terrorist+country), and thus should not be counted on to adopt policies that promote U.S. interests.

Even more troubling than the prospect of international developments possibly lowering natural gas prices in importing countries, U.S. natural gas exports will raise domestic prices 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,[56] but the NERA Study assumes that Henry Hub prices will always remain lower than prices in consuming nations.[57] Even if one assumes *arguendo* that the NERA Study is correct on this point, because domestic prices will have to remain somewhat below international prices in order to be competitive (given the add-on costs associated with liquefaction and export), the salient point remains that domestic prices will rise, potentially dramatically, which will have all of the adverse impacts chronicled above.

The U.S. has an opportunity not even imagined four or five 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 (which sharply contrasts with the history of natural gas price volatility in the U.S.). 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.

E. DOE/FE Has Failed To Overcome The Claims Made Above

DOE/FE has issued a number of orders approving LNG export applications under the same statutory scheme that governs Emera's proposed CNG exports, each relying on the same

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[56] *Id.* at 111.

[57] NERA Study at 12.

rationale. For example, DOE/FE issued Order No. 3413 in *Jordan Cove Energy Project, L.P.*, FE Docket No. 12-32-LNG (March 24, 2014). Throughout Order No. 3413, DOE/FE emphasizes its conclusion from the NERA Study that "the exports proposed in this Application are likely to yield net economic benefits to the United States."[58] The NERA Study shows, however, that while one sector of the U.S. economy will prosper from natural gas exports (namely, the natural gas production sector, including those in the export business) other sectors of the economy will be disadvantaged.[59] DOE/FE concludes that because there is ostensibly a "net" benefit, i.e., since those harmed, including the least well off in our society, are harmed less that the few that are helped benefit, that shows that this export is in the public interest. APGA submits that such analysis is completely without merit given the widespread harm done by LNG exports and the very limited number of beneficiaries. DOE/FE concedes that "[w]hile there may be circumstances in which the distributional consequences of an authorizing decision could be shown to be so negative as to outweigh net positive benefits to the U.S. economy as a whole," it nevertheless concludes that "we do not see sufficiently compelling evidence that those circumstances are present here."[60] APGA is hard-pressed to imagine a situation in which the distributional consequences are more dire than here – all American consumers, be they individuals or commercial establishments or businesses, are harmed; the production sector is benefitted (though, of course, the individual employees in those sectors will be harmed by higher gas and electric prices). If these distributional consequences are not sufficient to show that the public interest is not served by LNG export applications, one can only wonder what sort of evidence DOE/FE would consider "sufficiently compelling."

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[58] Order No. 3413 at 5; *see also id.* at 37, 103, 111, 140, 141, 144.

[59] *See, e.g.*, NERA Study at 8.

[60] Order No. 3413 at 103.

To be more specific, the NERA Study makes clear that –

- LNG exports will increase the domestic price of natural gas by not insubstantial amounts;[61]
- Rising natural gas prices will, among other things, "increase the cost of producing goods and services that are dependent on natural gas, which leads to decreasing economic output;"[62]
- As natural gas prices rise and the economy demands or produces fewer goods and services, the results are "lower wages and capital income for consumers" – i.e., "consumers save less of their income for investment;"[63]

And yet, despite these findings, the NERA Study concludes that all export scenarios are "welfare-improving for U.S. consumers" because "LNG exports provide additional export revenues, and…consumers who are owners of the liquefaction plants, receive take-or-pay tolling charges for the amount of the LNG exports."[64] Removed from the lexicon of macroeconomics and put in plain English, what this means is that all Americans are harmed by exports in various ways – higher direct gas and electric costs and higher indirect costs of consumer products and by making certain energy intensive industries less globally competitive, to name a few; but we are supposed to believe this is in the public interest because, at least according to the NERA Study, for all the harm that is done, there will nevertheless be a net benefit because "[t]hese additional sources of income" for the producing and LNG export sectors "outweigh the loss associated with

[61] NERA Study at 48.

[62] *Id.* at 49, *see id.* at 58.

[63] *Id.* at 58.

[64] *Id.* at 35.

higher energy prices. Consequently, according to the NERA Study, consumers, in aggregate, are better off as a result of opening up LNG exports."[65]

DOE/FE is in effect signing off on a "Robin Hood in reverse" view of what constitutes the public interest – extract money from the many for the benefit of the few – and justifies that approach by maintaining since the few benefit by more than the many are harmed, all is well from the standpoint of the public interest. But even if one assumes for sake of discussion that the many assumptions wrapped into the NERA Study are valid (a leap of faith to which APGA does not subscribe, as noted below) and that the algorithm used by NERA to produce its results is accurate (also questionable[66]), APGA believes that DOE/FE cannot overcome the known adverse distributional consequences of LNG exports by simply repeating the mantra that there are "net benefits." When, for example, are net benefits not sufficient to overcome distributional harm? When does the interest of a few not trump the harm to the many? When does DOE/FE take seriously the President's concern about the unequal distribution of wealth in this country – a situation only made worse for the many millions of American workers at or near the poverty level whose cost of living will be adversely affected by rising gas and electric prices due to LNG exports? Etc. None of these key questions is addressed with any degree of specificity by DOE/FE in its orders approving LNG export applications, which simply points to putative "net benefits" as the answer to all of the known downsides of LNG exports.

Another troubling aspect of the NERA Study is that it is based on questionable assumptions, assumptions that in light of the demonstrable harm of LNG exports to virtually all

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[65] *Id.* at 55.

[66] How can DOE/FE not question an algorithm that shows net benefits always increasing as the harm to the American consumer worsens? NERA Study at 12 ("NERA found that there would be net economic benefits to the U.S., and the benefits became larger, the higher the level of exports. This is because the export revenues from sales to other countries at those high prices more than offset the costs of freeing up that gas for export.").

Americans should cause DOE/FE to pause in its reliance on putative "net benefits" to justify such exports. For example, NERA treated the global LNG market as "a largely competitive market with one dominant supplier, Qatar, whose decisions about exports were assumed to be fixed no matter what the level of U.S. exports."[67] Since, as the dominant supplier, Qatar's decisions on export quantities and price can completely change the dynamics of the global market, and hence the results of the NERA Study, is DOE/FE justified in relying on such a study as the bedrock for authorizing exports that will harm most Americans, albeit, *if* the NERA Study is correct, benefitting a few by even more than the many are harmed, thereby producing "net benefits"?

Another key assumption of the NERA Study is as follows:

> All the scenarios were derived from the AEO 2011, and incorporated the assumptions about energy and environmental policies, baseline coal, oil, natural gas prices, economic and energy demand growth, and technology availability and cost in the corresponding AEO cases.[68]

The problem, of course, is that the EIA makes these forecasts of long-term natural gas supply, demand and price by extrapolating twenty or more years into the future with a model based entirely upon historical interrelationships between natural gas supply, demand, price and various sectors of the U.S. economy. In the case of *AEO 2011* the models were based upon data and relationships in the U.S. economy in 2006 and earlier. Even the recent *AEO 2014* is built in part on data from 2010. Consequently, the period of time and the interrelationships frozen into these backward-looking EIA models represent a time during which the U.S. was anxious to speed LNG ***imports***; a time during which natural gas supply was contracting and prices increasing; and a time that saw the decline of U.S. manufacturing to its lowest ebb. While

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[67] NERA Study at 5.

[68] NERA Study at 5.

models that extrapolate historical conditions into predictions of future conditions can be useful provided the forecast is not very far into the future and provided conditions remain similar to the assumptions built into the models, they are incapable of making reliable long-term predictions for periods that follow dramatic change. All parties agree that the shale gas boom has caused a paradigm shift in U.S. public policy discussions and our economy. It is therefore highly risky and irrational to make far-reaching policy decisions for this new future by relying upon models based on the opposite dynamics of the past.

DOE/FE cannot simply speculate as to how the many key, game-altering changes that have occurred since *AEO 2011* might affect the outcomes of the NERA Study;[69] rather, these changes must be analyzed in a meaningful fashion so that verifiable outcomes are produced. That has not been done. Nor does it suffice to argue that requiring DOE to start over with new, accurate data "would lead to significant costs and potentially endless delays."[70] Such "moving target" defenses for using dated information may be valid where the changes to the data are not so significant and game-changing; however, where, as here, the changes in data are fundamental and substantial and the impacts on American consumers uniformly harmful (albeit allegedly not on a "net" basis), that defense does not pass muster.

In brief, DOE/FE's reliance on the NERA Study for the proposition that LNG exports produce "net benefits" is flawed in many respects and may not, absent much more, be the basis for a reasoned finding that the subject LNG export is not inconsistent with the public interest. And DOE/FE's ultimate rejoinder that those opposing LNG exports because of the adverse distributional harm have not performed a "quantitative analysis of the distributional

[69] *See* Order No. 3413 at 86-88.

[70] *Id.* at 88.

consequences of authorizing LNG exports"[71] fails because once the demonstration of distributional harm is made, as it is by the NERA Study, the burden then falls on those supporting LNG exports to overcome that showing, which has not been done.

F. DOE/FE Should Suspend Any Further LNG Export Approvals To Non-FTA Nations Until The Updated EIA Study Is Completed.

For the reasons discussed herein, the EIA Export Report and the NERA Study are deeply flawed. They are based on stale data and do not reflect the rapid changes in the U.S. natural gas markets that have occurred since *AEO 2011* was published and only model export levels of 6 Bcf/d and 12 Bcf/d. These studies no longer provide a reliable record for DOE/FE to determine whether a CNG or LNG export application is in the public interest. The DOE/FE has now tacitly conceded this point by requesting an updated study from the EIA based on *AEO 2014* data and modeling export levels more representative of the volume of LNG export applications filed with DOE/FE, on the basis of which DOE/FE will authorize an external analysis of the economic impact of the increased range of LNG exports. APGA submits that under these circumstances the only prudent and lawful course of action for DOE/FE is to suspend any further natural gas export approvals to non-FTA Nations until the updated EIA and external studies are completed. Once completed, the updated EIA and external studies will give the DOE/FE a more accurate and complete record from which to make an informed decision about whether any additional natural gas exports to non-FTA Nations are in the public interest.

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) either (a) suspend consideration of the subject application until the updated EIA and external

[71] *Id.* at 103.

studies to be commissioned by DOE/FE are completed or (b) deny, as inconsistent with the public interest, Emera's application for export authority to non-FTA Nations.

Respectfully submitted,

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Its Attorneys

September 2, 2014

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

Emera CNG, LLC	)))	FE Docket No. 13-157-CNG

VERIFICATION

WASHINGTON	§
	§
DISTRICT OF COLUMBIA	§

Pursuant to 10 C.F.R. § 590.103(b) (2013), William T. Miller, 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.

William T. Miller

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Subscribed and sworn to before me this 2nd day of September, 2014.

Leslie K. Nelson-Walski

Notary Public
My Commission Expires: LESLIE K. NELSON-WALSKI Notary Public, District of Columbia My Commission Expires May 31, 2016

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

Emera CNG, LLC	)))	FE Docket No. 13-157-CNG

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 2nd day of September, 2014.

William T. Miller

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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 2nd day of September, 2014.

By: ______________________

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