



ORIGINAL

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

Freeport LNG Expansion, LP  
FLNG Liquefaction, LLC

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FE Docket No. 11-161-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,<sup>1</sup> 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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<sup>1</sup> 10 C.F. R. §§ 590.303, 590.304 (2011).

## 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 17, 2010, Freeport LNG Expansion, L.P. and FLNG Liquefaction, LLC (collectively, “FLEX”) filed an application in FE Docket No. 10-161-LNG for long-term, multi-contract authorization to export approximately 1.4 billion cubic feet per day (Bcf/d) of domestically produced liquefied natural gas (“LNG”) by vessel. FLEX sought authorization to export LNG from the existing Freeport Terminal on Quintana Island, 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. FLEX’s application in FE Docket No. 10-161-LNG, which was protested by APGA on March 28, 2011, remains pending.

On December 19, 2011, FLEX filed a separate application in the instant proceeding for additional long-term, multi-contract authorization to export another 1.4 billion Bcf/d of

domestically produced LNG by vessel. FLEX seeks authorization to export this additional LNG from the existing Freeport Terminal on Quintana Island, 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.

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**

FLEX's request for authority to export additional domestically produced LNG is inconsistent with the public interest and should be denied. The U.S. Energy Information Administration ("EIA") recently released a report on the effect of LNG exports in response to a U.S. Department of Energy Office of Fossil Energy ("DOE/FE") inquiry.<sup>2</sup> The EIA Export Report concludes that exporting domestic LNG will significantly increase domestic natural gas prices. In addition, EIA recently issued an early release of its Annual Energy Outlook 2012 ("*AEO2012*"), which substantially reduces the level of estimated technically recoverable natural gas in the Marcellus Shale formation. These new projections undermine the basis for FLEX's application, which is founded on the notion that vast recoverable shale resources will keep domestic gas prices low despite LNG exports.

Instead, it appears likely that exports will lead to potentially significant price increases that will 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.

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<sup>2</sup> *Effect of Increased Natural Gas Exports on Domestic Energy Markets*, U.S. Energy Information Administration (January 2012) ("EIA Export Report").



Inflated natural gas prices will also inhibit efforts to foster natural gas as a transportation fuel, which is important to wean the U.S. from its historic, dangerous dependence on foreign oil. Furthermore, high natural gas and electricity prices will reverse the nascent trend toward renewed domestic manufacturing before it gains momentum. Exportation of significant quantities of domestic natural gas would have significant adverse implications for domestic consumers of natural gas, for U.S. energy supply, and for national security. Therefore, FLEX's request for authority to export additional domestically produced LNG is inconsistent with the public interest and should be denied.

Furthermore FLEX's plan to export LNG will not prove economically viable in the long-run. Economically recoverable domestic natural gas may prove even less robust than the revised projections, especially given looming environmental costs and regulations. Eventually, foreign alternatives will remove the arbitrage opportunity that FLEX seeks to take advantage of, as natural gas reserves and export capacity expand around the world.

FLEX's application in the instant proceeding<sup>3</sup> claims to be "wholly separate" and independent from its previous application in FE Docket No. 10-161-LNG and, therefore, should be evaluated separately.<sup>4</sup> The DOE/FE, however, must consider the cumulative impact of proposed exports.<sup>5</sup> The instant request for additional export authority provides the perfect opportunity for the Commission to place reasonable limits on the volume of domestically produced natural gas available for export to nations that do not have a Free Trade Agreement requiring the national treatment for trade in natural gas. The instant application for additional

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<sup>3</sup> *Freeport LNG Expansion, L.P.*, FE Docket No. 11-161-LNG, Application (Dec. 19, 2011) ("Application").

<sup>4</sup> *Freeport LNG Expansion, L.P.*, FE Docket No. 11-161-LNG, Notice of Application, 77 Fed. Reg. 7568, 7569 (Feb. 13, 2012), citing, Application at 5.

<sup>5</sup> *See Sabine Pass Liquefaction, LLC*, FE Docket No. 10-111-LNG, Order No. 2961 at 33.

export capacity, especially when considered in light of FLEX's previous application and other pending export applications, is inconsistent with the public interest.

### **Background**

The DOE/FE previously granted FLEX's long-term, multi-contract authority to export the original proposed 1.4 Bcf/d of LNG export capacity 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").<sup>6</sup> 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."<sup>7</sup> Pursuant to this mandate, the DOE/FE did not have discretion to consider the implications of granting export authority to FLEX and stated that its order granting the request "should not be read to indicate DOE's views" regarding the policy arguments raised in FLEX's application.<sup>8</sup>

Similarly, DOE/FE recently granted FLEX long-term, multi-contract authority to export the additional proposed 1.4 Bcf/d LNG export capacity to FTA Nations, pursuant to the same statutory mandate.<sup>9</sup> DOE/FE stated again that its order granting this authority "should not be read to indicate DOE's views" regarding the policy arguments raised in FLEX's application.<sup>10</sup> Although the instant proceeding concerns the same volume of export capacity as previously authorized in Order No. 3066, the requested export authority is significantly broader, and

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<sup>6</sup> *Freeport LNG Expansion, L.P.*, FE Docket No. 10-160-LNG, Order No. 2913 (Feb. 10, 2011).

<sup>7</sup> 15 U.S.C. § 717b(c) (2011).

<sup>8</sup> Order No. 2913, at 6.

<sup>9</sup> *Freeport LNG Expansion, L.P.*, FE Docket No. 12-06-LNG, Order No. 3066 (Feb. 10, 2012).

<sup>10</sup> *Id.* at 5.

DOE/FE still retains the ability to prevent significant adverse consequences to the domestic market for natural gas.

Despite the earlier, automatic grants of authority, the DOE/FE has a duty to ensure that applications like the one before it in the instant proceeding for broader export authority are not inconsistent with the public interest pursuant to NGA section 3(a).<sup>11</sup> APGA commends the DOE/FE for taking this obligation seriously, including suspending approvals of individual export applications until after it has time to analyze a second report, following the EIA Export Report, regarding the effect of LNG exports on the domestic natural gas market.

This suspension of approvals includes FLEX's request for broader authority to export the original 1.4 Bcf/d in LNG export capacity in FE Docket No. 10-161-LNG. APGA stands by the arguments it made in its protest in this prior proceeding.<sup>12</sup> APGA's earlier concerns regarding inflated and inaccurate estimates of recoverable natural gas and further regulatory uncertainty surrounding alternative production have been borne out. At the same time, the trends APGA previously predicted, such as increased domestic demand for natural gas as a fuel for electric generation and motor vehicles, are coming to fruition.

The request for expanded export authority in the instant proceeding represents a serious miscalculation regarding the impact of LNG exports on the future of the domestic natural gas market and the ability to meet growing domestic demand. As explained further below, the recently released EIA Export Report and *AEO2012* undermine the basis for FLEX's current application and demonstrate that expanded export authority would be inconsistent with the public interest.

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<sup>11</sup> 15 U.S.C. § 717b(a) (2011).

<sup>12</sup> *Freeport LNG Expansion, L.P.*, FE Docket No. 10-161-LNG, Motion for Leave to Intervene and Protest of the American Public Gas Association (Mar. 28, 2011).



## **I. Exports Will Increase Domestic Natural Gas Prices**

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.”<sup>13</sup> Relatively low and stable domestic natural gas prices make natural gas competitive against coal and fuel oil and viable as a transportation fuel. The DOE/FE should not pursue policies that directly increase natural gas commodity prices for American consumers, thereby making natural gas less competitive in this country as a replacement for foreign-sourced fuels or for fuels that are less clean and more carbon-intensive. Today’s skyrocketing gasoline prices, occurring despite increase domestic oil production, should make apparent the dangers and downsides of the U.S. becoming part of a global natural gas market.

### **i. FLEX’s Application Does Not Accurately Forecast the Impact of Exports on Domestic Prices**

FLEX claims that additional exports from Freeport Terminal will have a “minimal effect on domestic natural gas prices.”<sup>14</sup> This assertion, however, is premised on an inadequate report with an overly narrow scope that fails to consider the full volume of proposed LNG exports, is based on outdated and likely inflated projections of technically recoverable gas in the U.S., and does not account for variable factors, such as the rate of export development or future economic growth.

FLEX failed to commission a price study focused on the effect of the 1.4 Bcf/d of additional exports planned from the Freeport Terminal. Instead, FLEX cites a report by a consulting firm, Deloitte, that assumes and analyzes a scenario where total domestic LNG export

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<sup>13</sup> *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.

<sup>14</sup> Application at 15.

capacity only reaches 6 Bcf/d and is limited to exports from just three export terminals, all on the Gulf Coast.<sup>15</sup> The Deloitte Report does not consider total applied for export capacity, export facilities planned on the Mid-Atlantic and Pacific coasts, or the specific export proposal before the DOE/FE in the instant proceeding.

According to FLEX, “LNG exports of 6 Bcf/d (equivalent to 2.2 Tcf/year) represent only an 8% increase in the projected 26 Tcf demand in 2016 when exports are anticipated to commence” under the assumptions stated in the Deloitte Report. In actuality, however, the total export capacity applied for to date is 14 Bcf/d and 13.71 Bcf/d to FTA and Non-FTA nations, respectively.<sup>16</sup> Total marketed natural gas production was approximately 66 Bcf/d in the U.S. in 2011;<sup>17</sup> therefore, based on current marketed production, the total applied for export capacity would result potentially in a roughly 21% increase in total natural gas demand. The total amount of export authority requested is far more significant than FLEX acknowledges. The DOE/FE should consider the cumulative impact of actual proposed exports and not accept at face value the report relied on by FLEX.<sup>18</sup>

In addition the Deloitte Report premised its price projections on a total of over 2,170 Tcf of technically recoverable natural gas, a number put forth by the Potential Gas Committee in April 2011, before the EIA drastically reduced its estimate of unproved technically recoverable gas in *AEO2012*. EIA now estimates that the “unproved technically recoverable resource (TRR)

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<sup>15</sup> *Id.* at 18, citing, Deloitte Center for Energy Solutions and Deloitte MarketPoint LLC, *Made in America: The Economic Impact of LNG Exports for the United States* (2011) (“Deloitte Report”).

<sup>16</sup> Summary: Long-Term Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower-48 States (as of March 23, 2012), available at [http://fossil.energy.gov/programs/gasregulation/LNG\\_Summary\\_Table\\_3\\_23\\_12.2.pdf](http://fossil.energy.gov/programs/gasregulation/LNG_Summary_Table_3_23_12.2.pdf).

<sup>17</sup> EIA Export Report at 1.

<sup>18</sup> See Order No. 2961 at 33.



of shale gas for the United States is 482 trillion cubic feet.”<sup>19</sup> This number is “*substantially* below the estimate of 827 trillion cubic feet in *AEO2011*.”<sup>20</sup> This reduction “largely reflects a decrease in the estimate for the Marcellus Shale, from 410 trillion cubic feet to 141 trillion cubic feet,” a reduction of over 65%.<sup>21</sup> EIA revised its Marcellus Shale estimates due to a U.S. Geological Survey (“USGS”) report that concluded that there is only 84 Tcf of “undiscovered, technically recoverable natural gas” in the Marcellus Shale formation,<sup>22</sup> and due to improved data from producers as drilling has expanded in the Marcellus area.<sup>23</sup>

The magnitude of this reduction is sobering. Not only are FLEX’s projected price increases inaccurate, the entire basis for its application is affected. FLEX cites “huge reserves” of domestic natural gas,<sup>24</sup> but DOE/FE must take a harder look at these claims given the recently revised estimates by EIA and USGS. DOE/FE’s previous decision in the *Sabine Pass Liquefaction, LLC* proceeding, Docket No. 10-111-LNG, accepted the applicant’s projections regarding natural gas supplies and the impact of exports without conducting an independent analysis. That will no longer suffice in light of the most recent EIA studies.

Specifically, DOE/FE must consider the EIA Export Report, which presumably it requested due to a lack of thorough and independent price impact data in pending LNG export proceedings. The EIA Export Report is of particular relevance in the instant proceeding because it considered a scenario similar to the one covered in the Deloitte Report as part of a set of scenarios, only more thoroughly.

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<sup>19</sup> *AEO2012* at 9.

<sup>20</sup> *Id.* (emphasis added).

<sup>21</sup> *Id.*

<sup>22</sup> *Assessment of Undiscovered Oil and Gas Resources of the Devonian Marcellus Shale of the Appalachian Basin Province*, United States Geological Survey (Aug. 23, 2011).

<sup>23</sup> *AEO2012* at 9.

<sup>24</sup> Application at 14, 22.

## ii. EIA Export Report

As requested by the DOE/FE, EIA analyzed four scenarios of export-related increases in natural gas demand:

- 6 (Bcf/d), phased in at a rate of 1 Bcf/d per year (low/slow scenario),
- 6 Bcf/d phased in at a rate of 3 Bcf/d per year (low/rapid scenario),
- 12 Bcf/d phased in at a rate of 1 Bcf/d per year (high/slow scenario), and
- 12 Bcf/d phased in at a rate of 3 Bcf/d per year (high/rapid scenario).<sup>25</sup>

In addition, DOE/FE requested that EIA consider the four scenarios of increased natural gas exports in the context of four cases from the EIA's then current *AEO2011* that reflect projected domestic natural gas supply situations and growth rates for the U.S. economy:

- the *AEO2011* Reference case,
- the High Shale Estimated Ultimate Recovery (“EUR”) case (reflecting more optimistic assumptions about domestic natural gas supply prospects, with the EUR per shale gas well for new, undrilled wells assumed to be 50 percent higher than in the Reference case),
- the Low Shale EUR case (reflecting less optimistic assumptions about domestic natural gas supply prospects, with the EUR per shale gas well for new, undrilled wells assumed to be 50 percent lower than in the Reference case), and
- the High Economic Growth case (assuming the U.S. gross domestic product will grow at an average annual rate of 3.2 percent from 2009 to 2035, compared to 2.7 percent in the Reference case, which increases domestic energy demand).<sup>26</sup>

In contrast, the Deloitte Report is inadequate. The Deloitte Report considers only one volume of future exports, 6 Bcf/d, which EIA appropriately determined would be the “low” export scenario. In addition, the Deloitte Report simply plugs this 6 Bcf/d volume in as the

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<sup>25</sup> EIA Export Report at 1.

<sup>26</sup> *Id.*

export capacity of the U.S. from 2016 through 2035 without analyzing the potential effect of divergent growth rates in export capacity or an expansion of export capacity over that time period. In the Deloitte Report, there is no accounting for the slow or rapid development of export capabilities. Even more deficiently, the Deloitte Report fails to consider the potential effects of different gas reserve scenarios or economic growth trends.

The conclusion that FLEX pulls from the Deloitte Report – that LNG exports will increase natural gas prices by 1.7% at the average U.S. citygate over the entire period from 2016 to 2035 – is also vague and incomplete compared to the detail provided by EIA.<sup>27</sup> Under every scenario, EIA forecasts that exports will increase domestic natural gas prices. According to EIA, “[l]arger export levels lead to larger domestic price increases.”<sup>28</sup> 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.”<sup>29</sup>

Even under the “low/slow” baseline scenario, EIA projects that wellhead price impacts will peak at about 14% in 2022 before moderating to just under 10% around 2026.<sup>30</sup> Under the low/rapid baseline scenario EIA projects that wellhead prices will be approximately 18% higher in 2016 than they otherwise would be, but that impact will also moderate to just under 10% by 2026.<sup>31</sup> 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.<sup>32</sup>

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<sup>27</sup> Application at 20-21.

<sup>28</sup> EIA Export Report at 6.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.* at 8.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.* at 9.



EIA projects that prices will increase by 36% to 54% by 2018 under the “high/rapid scenario,” depending on natural gas supplies and economic growth. Given the number of export applications that DOE/FE has received to date and the total export capacity requested of 14 Bcf/d and 13.71 Bcf/d to FTA and Non-FTA nations, respectively, it appears that “high/rapid” was the most realistic scenario considered by EIA.

In addition, the Low Shale EUR case reflecting less optimistic assumptions about domestic natural gas supply prospects than the *AEO2011* Reference Case may be the most accurate scenario considered in the EIA Export Report, given the reduction in technically recoverable gas per the early *AEO2012* overview report. Under the high/rapid scenario in the Low Shale EUR case, EIA projects that exports could increase natural gas prices by 54% in 2018.<sup>33</sup> Even under the slow/low scenario in the Low Shale EUR case, EIA projects that exports will increase domestic wellhead prices by 20% in 2020.<sup>34</sup>

Even these projections may not accurately predict the full scope of price increases resulting from unchecked LNG exports because the EIA Export Report very conservatively assumes that domestic prices will only be affected by domestic supply/demand factors but will not be affected by prices in the global market; it also fails to consider several factors that may further limit economically recoverable domestic gas supplies and increase domestic natural gas demand in the near future (as discussed below).

### **iii. Why Future Natural Gas Prices May Be Higher Than Projected**

#### Supply-Side

The *AEO2012* early report indicates that the amount of technically recoverable gas in the ground is less than projected in every scenario in the EIA Export Report save the Low Shale

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<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

EUR case. It may not be economically feasible or politically palatable, however, to recover all of the technically recoverable reserves of unconventional natural gas.

There is increasing regulatory uncertainty regarding the production of unconventional gas in the United States. This regulatory uncertainty stems from looming environmental and other regulations. These regulations will likely increase the cost of production and, thus, potentially limit the amount of economically recoverable natural gas. EIA's projections in its Annual Energy Outlooks and the Export Report are based on technical and economic data and do not consider the effect of possible regulation. This eventuality, however, cannot be ignored by DOE/FE when making policy decisions on export applications that are premised on ample future natural gas from shale formations.

### Environmental

The production of natural gas from shale formations requires hydraulic fracturing, commonly known as “fracking” – a practice that is under increasing environmental scrutiny. While it is true that there has been extreme rhetoric on both sides of the fracking issue,<sup>35</sup> there can be no doubt that the affected states and the federal government are taking the issue seriously and that shale gas production will one day be subject to increased environmental regulation.

Shale gas production raises environmental issues in three areas: water, emissions, and other pollution such as localized disruptions caused by work-site activity. In each instance, industry faces increased regulatory oversight and public opposition, raising production costs and

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<sup>35</sup> The newspapers are replete with articles chronicling the uncertain future of shale gas exploration. *See, e.g.*, Ian Urbina, *Regulation Lax as Gas Wells' Tainted Water Hits Rivers*, N.Y. Times Online (Feb. 26, 2011); Ian Urbina, *Wastewater Recycling No Cure-All in Gas Process*, N.Y. Times Online (March 2, 2011); Ian Urbina, *Pressure Limits Efforts to Police Drilling for Gas*, N.Y. Times Online (March 4, 2011); Darryl Fears, *Sitting Atop Huge Gas Reserve, Md. Debates Drilling Practice*, Washington Post Online (March 28, 2011); Ian Urbina, *Insiders Sound an Alarm Amid a Natural Gas Rush*, N.Y. Times (June 25, 2011). Contrary views also abound: *e.g.*, <http://johnhanger.blogspot.com/2011/06/statement-about-todays-nyt-front-page.html>.

limiting the amount of gas that can be recovered in an economically or politically acceptable manner.

Water issues may prove the most serious, starting with the contamination of drinking water, but also including the volume of water used in the process of fracking and the disposal of spent fracking fluid.<sup>36</sup> In November 2011, the EPA released a draft analysis from an investigation of ground water quality in Pavillion, Wyoming. At least preliminarily, the EPA found that the local aquifer contained “compounds likely associated with gas production practices including hydraulic fracturing,” and that chemical samples were “generally below established health and safety standards.”<sup>37</sup> The EPA’s draft analysis has “galvanized opponents of fracking” and raises the possibility of an outright ban on the practice.<sup>38</sup>

Congress has ordered the EPA to study water quality, water use and waste fluid disposal issues associated with fracking.<sup>39</sup> In addition, the EPA has announced that it will initiate

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<sup>36</sup> *Evaluating the Prospects for Increased Exports of Liquefied Natural Gas from the United States*, Brookings Institution, at 7 (January 2012) (“Brookings Report”).

<sup>37</sup> Press release, *EPA Releases Draft Findings of Pavillion, Wyoming Ground Water Investigation for Public Comment and Independent Scientific Review* (Dec. 8, 2012) available at [yosemite.epa.gov/opa/admpress.nsf/0/EF35BD26A80D6CE3852579600065C94E](http://yosemite.epa.gov/opa/admpress.nsf/0/EF35BD26A80D6CE3852579600065C94E).

<sup>38</sup> Brookings Report at 9.

<sup>39</sup> In its Fiscal Year 2010 Appropriation Conference Committee Directive to EPA, the U.S. House of Representatives ordered the EPA to conduct a study of hydraulic fracturing. That study is currently underway. See <http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/index.cfm>; <http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/index.cfm>.; On May 5, 2011, U.S. Secretary of Energy Stephen Chu impaneled a group of environmental, industry, and state regulatory experts to study and make recommendations to “improve the safety and environmental performance of natural gas hydraulic fracturing from shale formations.” See <http://www.energy.gov/news/10309.htm>; see also Bill Holland, *DOE Panel Questions Fracking’s SDWA Exemption*, Gas Daily (July 14, 2011).



proposed rulemakings to regulate the disposal of waste fluid produced by fracking and obtain data on the chemical substances and mixtures used as fracking fluid.<sup>40</sup>

With regard to emissions, in August 2011 EPA proposed rules for regulating air pollutants, particularly volatile organic compound (“VOC”) emissions, from hydraulically fractured oil and gas wells.<sup>41</sup> In addition, unintentional leaks of natural gas and intentional flaring have come under increased scrutiny.

### Demand Side

In addition to the supply concerns outlined above, analysis of future price increases has failed to consider the full extent of natural gas demand. FLEX claims that demand for natural gas is “elastic,”<sup>42</sup> and further speculates that technological developments will decrease demand for “fossil-fuel-generated electricity,”<sup>43</sup> which presumably includes both coal and natural gas. Notwithstanding these hopes and dreams, FLEX and even EIA make problematic assumptions regarding the elasticity of natural gas demand.

Electric generators face imminent EPA rules that will force the retirement of coal-fired generators. EIA considered possible greenhouse gas regulation as a factor that could ultimately drive-up domestic natural gas demand as coal production gives way to natural gas over time. EIA, however, failed to consider more traditional environmental regulations that will force the retirement of some coal generators in the near future, specifically EPA’s Mercury and Air Toxics

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<sup>40</sup> Press Release, *EPA Announces Schedule to Develop Natural Gas Wastewater Standards/Announcement is part of administration’s priority to ensure natural gas development continues safely and responsibly* (Oct. 20, 2011) available at <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/91e7fad4b114c4a8525792f00542001!OpenDocument>; *Hydraulic Fracturing Study Plan*, EPA (November 2011) available at [http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/upload/hf\\_study\\_plan\\_110211\\_final\\_508.pdf](http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/upload/hf_study_plan_110211_final_508.pdf).

<sup>41</sup> *New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews*, 76 Fed. Reg. 52,738 (August 23, 2011).

<sup>42</sup> Application at 20.

<sup>43</sup> *Id.* at 27.

Standards (“MATS”) and the recently delayed, but still pending, Cross-State Air Pollution Rule (“CSAPR”).<sup>44</sup> EIA did not consider these pending, more traditional environmental restrictions in its Annual Energy Outlooks, but it notes in the version of *AEO2012* released in January that a later version in April may consider the impact of MATS for the first time.<sup>45</sup>

Furthermore, the EPA recently issued a proposed rule that would limit carbon dioxide emissions from newly constructed power plants to 1000 pounds per megawatt-hour.<sup>46</sup> This proposed rule effectively bans new coal power plants, except perhaps those with state-of-the-art emissions control measures, but should still permit natural gas-fired plants without modification.<sup>47</sup> Over time, this proposed rule will lead to increased reliance on natural gas and further undermine demand elasticity.

EIA predicts that as natural gas prices increase due to exports, domestic demand will slacken with most of the decrease coming from the electric generation sector as utilities fire-up their existing “excess coal-fired capacity” to mitigate higher natural gas prices.<sup>48</sup> But the assumption of “excess coal-fired capacity” does not take into account pending MATS and CSAPR rules that will force retirements and increase dependency on natural gas-fired generation or the EPA’s recent proposed rule that will prevent new coal plants from coming online. With less demand elasticity, natural gas prices will likely increase by more than previously projected. At the same time, electricity prices will increase by more than anticipated in EIA’s report.

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<sup>44</sup> Ayesha Rascoe and Timothy Gardner, *U.S. Rolls Out Tough Rules on Coal Plant Pollution*, Reuters Online (Dec. 21, 2011) available at <http://www.reuters.com/article/2011/12/21/us-usa-coal-mercury-idUSTRE7BK1DI20111221>.

<sup>45</sup> *AEO2012* at 2.

<sup>46</sup> *Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units*, Proposed Rule, 77 Fed. Reg. 22,392 (Apr. 13, 2012).

<sup>47</sup> Felicity Barringer, *For New Generation of Power Plants, a New Emission Rule From the EPA*, New York Times Online (Mar. 27, 2012).

<sup>48</sup> EIA Export Report at 12.

The DOE/FE cannot take the modest price increases projected by FLEX, or even those projected by EIA, at face value. There are both supply and demand pressures that were not adequately considered in either study. In addition, neither evaluates the likely effect of volatile global markets on prices and volatility in the U.S. market.

## **II. Effect of High Prices**

Currently, relatively low natural gas prices give the U.S. an opportunity to wean itself off of carbon-intensive coal and expensive foreign oil, to attract renewed domestic manufacturing, and to stimulate displacement of gasoline by CNG-fueled vehicles. Increased prices due to exports jeopardize each of these prospects and ultimately our national security and national wellbeing. Estimates of domestic natural gas resources are still markedly higher than just a few years ago, but given revised supply projections, U.S. policy makers cannot take current low prices for granted.

Inflated prices will decrease the viability of natural gas as a bridge-fuel from carbon-intensive coal. Current low prices make natural 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 investors find natural gas competitive with coal. If exports inflate natural gas prices, the economics turn against cleaner burning natural gas.<sup>49</sup>

In addition, as discussed above, pending environmental regulations will soon force coal retirements, and further greenhouse gas regulation may 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,

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<sup>49</sup> *Id.* at 17.



electricity prices will spike as relatively cheap coal-fired generators are forced to retire for regulatory reasons. Spiking electricity rates will have rippling effects on the U.S. economy.

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 (and support infrastructure) would significantly reduce U.S. dependence on foreign oil, and thereby enhance U.S. security and strategic interests and reduce our trade deficit. Substantial resources are being expended today to put that infrastructure in place, including an initiative in Texas near the Freeport Terminal.<sup>50</sup>

Earlier this year, in his 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.”<sup>51</sup> Low natural gas prices in the U.S. provide the path forward. Lower energy prices are spurring a nascent return to American manufacturing. FLEX’s application cites the jobs its proposed expansion may create.<sup>52</sup> FLEX does not acknowledge, however, the many jobs in other sectors of our economy that may be destroyed if the DOE/FE sanctions further natural gas exports and predicted increases in natural gas prices occur along with increased price volatility.<sup>53</sup>

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<sup>50</sup> 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 for wider-scale deployment of heavy-duty, mid- and light-duty natural gas vehicles (NGVs) in the Texas market).

<sup>51</sup> President Barack Obama, State of the Union Address (Jan. 24, 2011), transcript available at: <http://www.whitehouse.gov/state-of-the-union-2012>.

<sup>52</sup> Application at 16.

<sup>53</sup> See Brookings Report at 18 (“The industrial sector is highly price-sensitive with respect to energy inputs”).

Economic data demonstrate that when domestic energy prices increase, the country loses manufacturing jobs, particularly in the fertilizer, plastics, chemicals, and steel industries.<sup>54</sup>

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

### **III. FLEX Exports Will Not Prove Economical**

FLEX's expanded export plans likely will eventually 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 FLEX and other would-be exporters with appealing arbitrage opportunities in the short-term, but they may not last. Gas rich shale deposits are a global phenomenon that are just now beginning to be tapped. As other nations develop their resources and export capacity and as U.S. natural gas prices increase due to the very exports FLEX proposes, international and domestic prices will converge, leaving the U.S. with the worst of all worlds, i.e., higher (and likely more volatile) 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.<sup>55</sup> The State Department launched the Global

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<sup>54</sup> 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>

Shale Gas Initiative (“GSGI”) in April 2010 in order to help countries identify and develop their unconventional natural gas resources.<sup>56</sup> To date, partnerships under GSGI have been announced with China, Jordan, India, and Poland.<sup>57</sup> The big energy players, including ExxonMobil, Chevron, Shell, BP, etc. are spending billions of dollars world-wide to pursue shale gas plays.<sup>58</sup>

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.<sup>59</sup> 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.<sup>60</sup>

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

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<sup>55</sup> 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/KuuskrasHandoutPaperExpandedPresentWorldwideGasShalesPresentation.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”).

<sup>56</sup> See <http://www.state.gov/s/ciea/gsgi/>.

<sup>57</sup> *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).

<sup>58</sup> Ken Silverstein, *Big Oil Betting on Shale Gas*, EnergyBiz (July 31, 2011).

<sup>59</sup> MIT Energy Initiative, *The Future of Natural Gas*, at 14 (2011).

<sup>60</sup> *Id.*



Furthermore, less price differential means less opportunity for price arbitrage. A convergence of international natural gas prices would be devastating for American LNG exporters, but especially FLEX. FLEX plans to export on a business model “based primarily on Liquefaction Tolling Agreements (‘LTA’),” instead of entering into long-term export agreements directly with foreign buyers.<sup>61</sup> FLEX envisions that “large volumes” of gas exported pursuant to the authority requested in this proceeding “are likely to be acquired on the spot market.”<sup>62</sup> FLEX is gambling that current trends and price disparities will continue long enough into the future that it will remain profitable to not only export the original 1.4 Bcf/d it requested in FE Docket No. 10-161-LNG, but that it will still be profitable to export an additional 1.4 Bcf/d once it expands the export capability at the Freeport Terminal.

Even at today’s prices, domestic natural gas is at a disadvantage compared to gas sourced from certain other nations. For example, there are three Canadian export facilities under construction in British Columbia, and Canadian natural gas still tends to trade lower than domestic gas in the contiguous United States.<sup>63</sup> Canada and the U.S. are not alone in developing LNG export capacity; investors in Australia hope to overtake Qatar as the world’s largest exporter of LNG.<sup>64</sup> 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.<sup>65</sup>

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<sup>61</sup> Application at 7.

<sup>62</sup> *Id.* at 10.

<sup>63</sup> Brookings Report at 25.

<sup>64</sup> 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>.

<sup>65</sup> Brookings Report at 23.

LNG itself is at a disadvantage compared to pipelines due to higher fixed costs. For example, if FLEX supplies Western Europe, it could one day find itself competing with shale gas piped from Poland or Ukraine at lower fixed costs. The cost of liquefaction, transportation and regasification processes and facilities must be acknowledged when considering the economic wisdom of LNG projects. The Brookings Institution estimates that current price spreads between the U.S. and potential export markets must remain intact for at least 10-12 years in order for investors to recoup the pre-planning and facility construction costs associated with an LNG terminal.<sup>66</sup> Beyond that, domestic prices must still be low enough to overcome foreign competition and the higher fixed cost of liquefaction, transport by vessel and regasification.

The EIA has reduced the projected technically recoverable resources of domestic natural and independently concluded that LNG exports will increase domestic prices substantially. These reports come on the heels of EPA's recent preliminary findings that hydraulic fracturing may pollute groundwater and other indications of increased regulatory scrutiny of unconventional gas production. Despite this sobering news, the U.S. may still have an opportunity to transition away from our reliance on coal-fired electricity generation, without risking price shocks, and finally 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 will likely turn out to be another failed venture as natural gas production and export capacity develop throughout the world.

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<sup>66</sup> *Id.* at 29.

#### 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, FLEX's application for additional export authority.

Respectfully submitted,

AMERICAN PUBLIC GAS ASSOCIATION

By 

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Its Attorneys

April 13, 2012



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

Freeport LNG Expansion, LP  
FLNG Liquefaction, LLC

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FE Docket No. 11-161-LNG

VERIFICATION

WASHINGTON

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DISTRICT OF COLUMBIA

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Pursuant to C.F.R. § 590.103(b) (2011), 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 13<sup>th</sup> day of April, 2012.

Leslie K. Nelson-Walski  
Notary Public

My Commission Expires:

**LESLIE K. NELSON-WALSKI**  
Notary Public, District of Columbia  
My Commission Expires May 31, 2015

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

Freeport LNG Expansion, LP  
FLNG Liquefaction, LLC

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FE Docket No. 11-161-LNG

**CERTIFIED STATEMENT OF AUTHORIZED REPRESENTATIVE**

Pursuant to C.F.R. § 590.103(b) (2011), 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 13<sup>th</sup> day of April, 2012.



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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) (2011).

Dated at Washington, D.C., this 13<sup>th</sup> day of April, 2012.

By:



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