From: Patrick Flaherty
To: LNGStudy; [redacted]
Subject: Comment on EPA review of export of LNG from the lower-48 States
Date: Thursday, January 24, 2013 2:04:23 PM
Attachments: Comment on EPA applications to export domestically produced LNG.pdf

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DOE/EPA review panel:
Please find the attached PDF of my comments.
Respectfully,
Patrick Flaherty
[redacted]

Comment on EPA applications to export domestically produced LNG from the lower-48 States:

To Whom it may concern:

Thank you for the opportunity to comment on the 24 pending applications under EPA review that address the applications to export domestically produced liquefied natural gas (LNG) to both free-trade countries and non-free trade countries. The quantities requested for export result in a total of 31.41 billion cubic feet per day (Bcf/d) of LNG to Free-trade countries and 28.4 Bcf/d to Non-free trade countries. This converts to a total of 59.81 Bcf/d or 1.2 million metric tons per day. Over a single one-year period that would equate to 438 million metric tons per year.

The quantity requested for export is significant; the resultant environmental impact of the approval of these applications will be equally significant. Additionally, the requests for exporting LNG from marine terminals (that were originally approved for import) represents a major **reverse engineering of the North American gas supply system**. It can be rationally presented that this reverse engineering will impact not only the foot print of the export terminal but also gasfield origins, mainstream infrastructure, as well as the compressors and docking facilities. The anticipated impacts can categorized as environmental and economic: Approval of these applications without careful analysis of environment impacts from the gasfield to the port is inconsistent with appropriate prudence from a governmental agency. It is presumed that the possibility for significant impact was the impetus behind the NERA report. It has been established that the driving economic incentive for LNG export is the global price differential of LNG in foreign markets. Both the US Department of Energy's Office of Fossil Energy report "Effect of Increased Natural Gas Exports on Domestic Energy Markets, January 2012" (EIA) and the NERA report on "Macroeconomic Impacts of LNG Exports from the United States, December 2012" (NERA) have identified that this exportation of LNG will raise domestic gas prices. With a current market value for natural gas of $4 per (metric million British Thermal Units) MMBtu in the United States while the value of $16 per MMBtu exists in Asian markets, there is a major economic advantage to export this domestic resource (EIA).

A significant factor that must be considered is the external financial origins or obligations for the companies applying for these export permissions; See Table 1. The majority of the companies applying for these applications are foreign-owned entities or have significant foreign delivery contracts.

Although it is understandable that the precision engineering required for compressing gas produced in the USA to -169 ^{o}C should utilize the best engineering and safest transport in the world, it is not at all correct that the export of domestically produced gas is in the best interests of the citizens of this country. Natural gas consumption in the US for 2010 was 23.8 tcf and production was 21.1 tcf (NERA); a deficit of 11.3 % of consumption required importing gas from other countries. The majority of gas that leaves these US ports will be owned by foreign

entities and bound for other countries. **The argument that these facilities will promote a net "wealth transfer" into this country is incorrect. Also, the suggestion offered by NERA that these facilities "will improve the U.S. balance of trade.", is impossible to verify based on the external ownership of these facilities.**

The Macroecnomic analysis presented (both EIA and NERA) indicate that export of gas – who's only added value is transport and compression- represents a **significant financial advantage to a limited number of individuals while increasing the cost of gas for domestic (USA) consumers** and devalues non-affiliated industries.

Better utilization of resources that providence has given the USA should include conversion of this minimally processed commodity into a higher value product. This strategy of production of higer value comities or products at the well head was the founding basis for the growth of modern chemical manufactures Dow Chemical and SABIC. Interestingly in Western PA, the initial gas field development fueled the burgeoning glass industry that established both Corning and PPG. This strategy of creating value added products rather than just exporting BTU's to other countries will encourage the development of domestic industry and provide a higher-value commodity that will more favorably impact a larger percentage of the population. **Often an economic imperative of dampening "boom or bust" cycles is cited as a rationale for these export terminals. This is incorrect. Massive extraction coupled with aggressive export to foreign markets will generate a "<u>Boom then Bust</u>" economy that will de-industrialize the US. Utilizing domestic gas to reindustrialize the USA is more sustainable, less prone to "boom or bust" cycles, more economically productive on a global scale, and benefits all parts of society.**

Thus denial of these applications and the encouragement of domestic utilization and domestic conversion to higher valued products would have the following desired impacts:

- •A more stable economy
- •A stronger industrial base for the USA
- •Better energy independence
- •Less dependence in foreign investment and consequent political entanglements
- •Sustainable economic development with more stakeholders
- •More individuals with a better stake in the economic fortunes of the USA
- •More wealth overall and more individuals with greater wealth

All of these reasons to encourage domestic utilization and domestic conversion to higher valued products would be consistent with the **EPA's mission statement** to protect human health and the environment by ensuring that environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy to benefit all parts of society -- communities, individuals, businesses, and state, local and tribal governments to make our communities and ecosystems diverse, sustainable and economically productive.

Respectfully submitted;

Patrick Flaherty January 24, 2013
[redacted]

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Table 1. Origins and Obligations of companies applying for Export permits:

Company	Foreign affiliation
Sabine Pass Liquefaction, LLC	a subsidiary of Cheniere Energy Partners LP
Freeport LNG Expansion, L.P. / FLNG Liquefaction, LLC	Connoco Phillips, 20 year contract with Osaka Gas and Chubu electric
Lake Charles Exports, LLC	Liquefied Natural Gas Limited, Perth Australia
Carib Energy (USA) LLC	USA based
Dominion Cove Point LNG, LP	USA based
Jordan Cove Energy Project, L.P.	Veresen Energy, Calgary, Alberta
Cameron LNG, LLC	USA based
Gulf Coast LNG Export, LLC	USA: 97 % of stock owned by a single individual
Gulf LNG Liquefaction Company, LLC	USA: 97 % of stock owned by a single individual
LNG Development Company, LLC	Noble Group, listed in Singapore
SB Power Solutions Inc.	Shobuj Bangla Energy, Bangladesh
Southern LNG Company, L.L.C.	USA based, privately owned: Birmingham, AL
Excelerate Liquefaction Solutions I, LLC	USA based
Golden Pass Products LLC	Qatar Petroleum International and Exxon Mobil
Cheniere Marketing, LLC	Registered in Delaware, Based in Houston, alliances with BG (England), Gas Natural Fenosa (spain), Gail (India), KoGas (south Korea)
Main Pass Energy Hub, LLC	Based in Arizona, extensive alliances with international metal refiners and other national gas generating companies
CE FLNG, LLC	Cambridge Energy, Bermuda
Waller LNG Services, LLC	USA based
Pangea LNG (North America) Holdings, LLC	Pangea LNG Amsterdam, The Netherlands
Magnolia LNG, LLC	Perth, Western Australia
Trunkline LNG Export, LLC	Trunkline , British
Gasfin Development USA, LLC	USA based