

**Larine Moore**

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**From:** Colon, Yvette [Yvette.Colon@alcoa.com] on behalf of Bowen, Rick [Rick.Bowen@alcoa.com]  
**Sent:** Thursday, January 24, 2013 3:57 PM  
**To:** LNGStudy  
**Subject:** 2012 LNG Export Study Alcoa Comments  
**Attachments:** 20120124\_Comments on 2012 LNG Export Study 77 Fed. Reg. 29894.doc



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Rick Bowen  
President - Energy

January 24, 2013

VIA ELECTRONIC DELIVERY

Mr. John Anderson  
U.S. Department of Energy (FE-34)  
Office of Natural Gas Regulatory Activities  
Office of Fossil Energy  
Forrestal Building, Room 3E-042  
1000 Independence Avenue SW  
Washington, DC 20585

RE: Comments on 2012 LNG Export Study 77 Fed. Reg. 29894

Dear Mr. Anderson:

Alcoa is a manufacturing company employing 26,000 people in the United States, producing primary aluminum and value-added components for major US industries, including aerospace, automotive and building and construction. Our locations are major economic engines for the communities in which we operate, providing good jobs with competitive pay and benefits as well as substantial tax revenue to local and state government. Our upstream businesses are classified as Energy Intensive Trade Exposed (IETE) manufacturing, which makes us particularly interested in the energy climate in the United States and, more specifically, the cost of natural gas. And throughout our production chain, the cost of energy has a substantial impact on our US manufacturing locations' ability to compete in global markets.

With that in mind, we respectfully submit these comments on the recently released report by the National Economic Research Associates (NERA) for the Department of Energy on the impact of Liquefied Natural Gas (LNG) exports.

Alcoa, as with many others in a similar situation, has serious concerns regarding the quality of the NERA study entitled, "Macroeconomic Impact of LNG Exports from the United States." The study indicates that exports of LNG will increase domestic prices and significantly damage energy intensive manufacturers, shifting the benefits to companies owning LNG export terminals. Yet it goes on to dismiss this impact as incidental to the overall economic benefit. While we believe that LNG exports will form an important component of the US energy market, we believe the NERA study reached conclusions based on incomplete data and as a result failed to give the DOE a full understanding of the potential impact of unlimited LNG exports.

**Alcoa's Position:**

Alcoa favors a balanced approach to energy policy, developing domestic and international markets while avoiding distortions that increase domestic price and/or price volatility. Stable and competitive energy costs help grow employment in industrial jobs, an important contributor to strengthening the middle class and the communities and regions where these employers are located.

January 24, 2013

Page 2

Alcoa and its employees have already begun to benefit from the lower cost of natural gas in the US. For example, our alumina refinery in Pt. Comfort, Texas, was historically one of our highest cost refineries. Now, with more competitive energy costs in the US, it is one of the most competitive refineries in the world.

While Alcoa agrees that there is a role for reasonable exports of LNG in the US gas market, we caution that quickly expanding exports of US LNG to non-Free Trade Agreement (FTA) countries, which represent over 80 percent of global LNG demand, could raise US prices substantially. The Energy Information Administration (EIA) projected price increases of as much as 54 percent under some scenarios if LNG exports hit 12 bcf/day. Pending export applications are nearly double that amount.

The NERA report supports this concern somewhat, projecting a negative impact on Energy Intensive Trade Exposed industries if non-FTA exports are significantly expanded. This is in sharp contrast to the current optimism in the US about industrial renewal and the announced investments in that sector which foretell a boost in industrial employment. The NERA study should model a reduction in this wave of industrial renewal to properly account for the difference between the unlimited export and lower export scenarios.

LNG supply agreements are typically long-term, so decisions made now will have consequences for decades. For example, in Australia, where abundant gas resources are committed to a long-term export business, gas prices are more than twice current US rates, putting domestic manufacturers at a disadvantage. All of this together argues for a go-slow approach that takes into account the potential impacts on all stakeholders.

#### **Alcoa's key points on the NERA Study:**

**The NERA study does not properly compare the economic benefits of exporting natural gas to using it as a domestic job creator. This vastly underestimates the benefit of investment in manufacturing to the US domestic economy.**

LNG exports will benefit a narrow section of the US economy, namely the producing community. The report does not take into account the higher value benefit of using energy to produce goods in the US for export abroad. When Alcoa looks at the economic impact of a manufacturing facility in the US, we count the annual wage income, the local job impact, the tax base, charitable contributions and the volunteer work of our employees. We use models aligned with several universities to calculate the full economic benefit of manufacturing in a US location. Clearly this sort of analysis is available but was not done in the NERA study to compare the relative benefit of export of a raw material versus using this resource to produce value-added products. It does not balance costs and benefits across a broad spectrum of the US economy.

**The NERA report inappropriately uses the Energy Information Administration Annual Energy Outlook (EIA/AEO) 2011 Demand Forecast, which says demand for natural gas to produce electricity will decrease by 2020 with only a small increase in industrial demand.**

The EIA/AEO 2011 forecast is incorrect since it does not take into account the demand side changes which are underway due to abundant amounts of lower priced natural gas now available. There have been numerous announcements of new industrial investments in the US and there will also be a need to replace a significant portion of coal fired generation in the next 15 years.

We recommend this study be repeated to reflect a set of assumptions which incorporate different levels of domestic investment in industrial and utility infrastructure that utilize natural gas for production of goods and electricity.

**The NERA study improperly addresses the economic impact of Energy Intensive Trade Exposed (EITE) businesses.**

NERA underplays the role of EITE industries and seems to avoid the discussion that this sector could expand significantly. The jobs created by EITE employers are typically higher skill, higher wage employment. The DOE should fully consider the value of growing employment in this sector.

**The NERA study fails to acknowledge how unfettered LNG exports would harm the middle class and contribute to making the US economy less stable and less sustainable.**

The NERA study finds that LNG export hurts the US middle class. This is a significant red flag. NERA acknowledges that for LNG export “both wage income and income from capital investment are reduced.” NERA goes on, however, to estimate how LNG export increases average household income. NERA notes this increase is driven by large gains made by a narrow slice of our economy – the natural gas resource owners. NERA asserts that declines in wage income will be partially offset by gains these households will realize in their various investments in natural resource companies.

However, as NERA should be aware, few middle income households that depend upon income from wages have significant income from investments in natural gas resource companies. Even assuming that all of those gains actually accrue to US households, this distribution of benefits improves the mean US household income but lowers the median. This is a loss for middle income families already struggling to keep pace with real income growth.

**Structured ownership of or partnerships in a significant share of gas production in the US provides limited royalties to US taxpayers.**

The recognized value of any exports would be the NYMEX price of natural gas into the liquefaction plant. The difference between the US market price and the world price for LNG would be a value stream that could be structurally lost to US taxation since these entities will likely be set up in the most tax efficient manner. In contrast, a thriving domestic manufacturing base, and resulting economic multipliers, would have a much greater revenue impact on local, state and federal government.

**The NERA report may be underestimating the impact of federal Environmental Protection Agency (EPA) and Bureau of Land Management (BLM) regulations on natural gas drilling, which could be a meaningful driver of increased demand in case of EPA regulation and driving lower supply in the case of BLM restrictions.**

While these remain unknown, they could significantly impact the supply demand balance in the long term. The NERA study follows the 2012 DOE/EIA report: “Effects of Increased Natural Gas Exports on Domestic Energy Markets.” Both studies rely on outdated assumptions on domestic demand and price projections. The level of uncertainty introduced by using an outdated forecast and not blending in EPA and BLM changes, plus the early stages of

understanding the resource, its magnitude and potential domestic benefit, all point to the need for a methodical stepwise approach to unlimited exports.

**The NERA study mis-characterizes the high export scenario that has developed in Western Australia. There, the focus on exports is doing long-term damage to a diversified economic base.**

Western Australia has an abundant gas supply, but domestic manufacturers are burdened with pricing that is two to three times greater than current US natural gas prices, largely as a result of unlimited exports of natural gas. Western Australia is a heavily resource based economy, so the impact on the overall economy is not as harmful as it would be to a more diversified economy, such as the United States. However, Australian EITE manufacturers are having significant challenges, with plant expansions being delayed or cancelled due to energy prices.

Of note is that other large exporters of LNG do not have a significant industrial base to maintain, which in itself is a large socio-economic issue for them. However, even exporters recognize that in order to develop local manufacturing, energy prices must be reasonable, especially for EITE industries.

**Unlimited LNG export sub-optimizes the value of a one-time, temporary opportunity to benefit the US economy.**

Hydrocarbon rich shale is well distributed globally and will eventually be a source of natural gas in other regions of the world. The technology and knowhow to produce natural gas from shale has given the US a one-time, early adopter advantage. We should leverage this advantage in the best way we can. Our economic competitors will be harvesting their shale resources soon enough. The US, as the first mover, should use our fleeting window of opportunity to build a lasting advantage by raising the education and skill levels of our workforce, rebuilding our national infrastructure and modernizing and revitalizing our manufacturing base.

Further, if we develop our LNG export infrastructure too quickly and stifle industrial renewal, there is additional risk. Once other regions develop their shale, there is a risk of flooding the market with natural gas globally and stranding the investment in LNG export facilities in the US, similar to what happened for the import terminals. In addition, the US will not have used its advantage to bolster the industrial base prior to the rest of the world gaining access to affordable local shale gas.

**Energy security and energy independence for the US are not yet a reality.**

One of the key strategic issues for the US is energy security and energy independence. In the past, the US has directed significant resources and foreign policy effort to assure US energy security. The US does import less oil today. But energy overall still represents a significant import, especially when considering the energy content of other goods imported into the US. Further, crude oil is currently five to six times the price of US natural gas per energy unit purchased. To balance the trade on a cash basis, the US would have to export five times more natural gas energy than the oil it currently imports.

Before providing a large benefit to a single sector of the economy, perhaps we could put in place measures that make long-term energy security a reality and achieve that with reasonably priced energy. That does not mean subsidizing natural gas, but rather maximizing the fuel switching

January 24, 2013

Page 5

benefits. Taking this route would lower the overall cost of energy to the US economy right down to individual consumers.

### **In Conclusion**

The NERA study is tackling an important issue. Unfortunately, serious data flaws and gaps in methodology call into question the accuracy of its conclusions. As a result, we would respectfully request that the study be re-evaluated and that the Department proceed carefully in granting non-FTA export licenses until the impact on domestic manufacturing is better understood.

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'RB', with a long horizontal line extending to the right.

Rick Bowen  
President  
Alcoa Energy