America's Energy Advantage

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To: Interested Parties

From: America's Energy Advantage

RE: Summary of Expert Analysis on Harmful Consequences of Unchecked LNG Exports

America's Energy Advantage (AEA) is a trade association representing many of the world's leading manufacturers and commodity producers, as well as the United States' publicly-owned natural gas distribution companies. Our organization is a strong supporter of rules-based free trade but we are very concerned that the Department of Energy's (DOE) recent approvals of multiple applications to export natural gas to non-free trade agreement (FTA) nations has pushed the United States into a danger zone that will increase prices for consumers and harm manufacturers, negatively impacting capital investment, job creation and the overall health of the U.S. economy.

To aid policymakers, industry observers and the news media in their ongoing debate over the question of LNG exports, we have prepared the following memorandum that summarizes the issues at stake and cites a multitude of independent third party studies that conclude that excessive LNG exports will have profoundly negative effects on the U.S. economy.

I. The shale gas revolution is powering an American manufacturing renaissance

America's newfound abundance of natural gas is powering a remarkable manufacturing renaissance, which to date has generated more than $110 billion of announced investment in over 120 different manufacturing projects, responsible for creating more than 68,000 manufacturing jobs this year. America's natural gas advantage is so significant that U.S. companies are beginning to "reshore" foreign operations back to the United States, a trend that could lead to an additional five million direct and indirect jobs by 2020. A wide range of foreign companies are locating manufacturing operations – and the jobs that accompany them – in the U.S. Recent expert analyses document these trends:

- In August, the Boston Consulting Group (BCG) found that the growth of natural gas supplies and the reshoring of businesses is projected to create 2.5 million to 5 million U.S. jobs by decade's end as manufacturing relocates to the United States. That, in turn, could reduce the unemployment rate by as much as two or three percentage points.[1]
- The report also suggests that by 2015, the United States will have an 8 to 18 percent cost advantage over the advanced economies of Europe with the biggest drivers being cost advantages in natural gas and electricity.[2]

[1] Behind the American Export Surge, Boston Consulting Group, August 2013
[2] ibid

- The shale gas revolution continues to power manufacturing growth. The Institute for Supply Management's monthly index shows the manufacturing sector has grown for six consecutive months. The October reading of 56.4 is the index's highest point since April 2011.[3]
- A September report from IHS Global Insight offered further confirmation of the manufacturing renaissance underway because of unconventional gas supplies. "Driven by a rise in domestic production and manufacturing that will displace imports . . . the trade deficit will be reduced by more than $164 billion in 2020 – equivalent to one-third of the current US trade deficit."[4]
- IHS also noted that unconventional gas supplies will support "more than 460,000 combined manufacturing jobs (3.7 percent of all manufacturing jobs) . . . in 2020, rising to nearly 515,000 (4.2 percent of total manufacturing jobs) in 2025."[5]
- An American Chemistry Council May 2013 report examined nearly 100 announced chemical and plastics manufacturing projects totaling $71.7 billion in potential new U.S. investment. By 2020, the projects are projected to create 46,000 chemical industry jobs, another 264,000 jobs in supplier industries and 226,000 "payroll induced" jobs in communities where workers spend their wages, generating $20 billion in federal, state and local tax revenue. Nearly 1.2 million additional, temporary jobs will be created during the capital investment phase that occurs between 2010 and 2020.[6]

II. Unchecked LNG exports will cause domestic gas prices to spike, harming consumers, manufacturers and adversely impacting the economy

Multiple expert third party analyses suggest that increased domestic demand, exacerbated by high exports, will increase natural gas prices to harmful levels:

- In January, Purdue University found that whether LNG export levels are at 6Bcf/day or 12Bcf/day (NERA's low and high scenarios), GDP will decline and all American's will be plagued by higher electricity prices.[7]
- The Purdue study concluded that, "Increased U.S. natural gas exports will reduce energy costs for industry and consumers in foreign countries and increase those costs for the U.S. Thus, U.S. industry will be rendered less competitive compared with foreign industry. This loss of export revenue would be in addition to the GDP loss estimated in this analysis. Moreover, U.S. consumers lose due to higher energy prices, and foreign consumers gain."[8]

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[3] "October 2013 Manufacturing ISM Report On Business" Institute for Supply Management, November 1, 2013.
[4] "The Unconventional Oil & Gas Revolution and the U.S. Economy," IHS Global, September 4, 2013
[5] ibid
[6] "Shale Gas and New U.S. Chemical Investment: ACC Analysis of Announced Projects," American Chemistry Council, May 2013.
[7] "Comparison of Analysis of Natural Gas Export Impacts from Studies Done by NERA Economic Consultants and Purdue University," Purdue University, January 13, 2013.
[8] ibid

- In March of this year, Charles Rivers Associates (CRA) warned that unchecked exports of U.S. natural gas could lead to a tripling of natural gas prices from current levels by 2030. It also noted that manufacturing is highly sensitive to natural gas prices, and a significant portion of the U.S. manufacturing sector is exposed to impacts from projected increased natural gas prices.[9]
- In June, the PIRA Energy Group released analysis showing that unchecked exports will lead to "significantly more" volatility in the U.S. gas market due to exposure to supply, demand, inventory and pricing issues in other parts of the world.[10]
- The same PIRA analysis concluded that "the Henry Hub price ramifications will be substantial," projecting prices will rise to the $6-$8.20 per million Btus range in the 2020-2025 period.[11]

III. The Department of Energy is relying on obsolete data to justify continued LNG exports

The natural gas marketplace has evolved so rapidly that the conclusions made in the Department of Energy's commissioned report by NERA Economic Consulting have been rendered obsolete. Nearly every respected energy market analysis has forecast natural gas demand – domestically and internationally – to dramatically exceed DOE projections.

- In September, Facts Global Energy projected LNG export volumes at a much higher level than the Energy Information Administration (EIA): 40 million tonnes/year in 2020 and almost 80 million TPY in 2025, assuming full utilization of capacity, vs. 5.5 million TPY in 2020 and almost 30 million TPY in 2030 in the annual energy outlook reference case.[12]
- In September, ConocoPhillips projected domestic natural gas demand will exceed DOE's projections by 30 percent in 2017 – just four years from today.[13]
- In September, JP Morgan's global head of commodities research projected that natural gas prices will spike to $8.00 per million Btus by 2016 — more than doubling its current price in three years.[14]
- Last month, engineering and construction firm Black & Veatch released a survey of market participants that projected natural gas prices to climb to as high as $7.49 per million Btus through 2020.[15]
- The Eurasia Group predicted that natural gas demand could be as much as 10 times greater than the 2020 EIA reference case scenario.[16]

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[9] "US Manufacturing and LNG Exports: Economic Contributions to the US Economy and Impacts on US Natural gas Prices," Charles Rivers Associates, February 25, 2013.
[10] "Liquefied Henry Hub: The Repercussions of North American LNG Exports at Home and Abroad," PIRA Energy Group, June 2013.
[11] ibid
[12] "U.S. gas price sensitive to LNG exports," Facts Global Energy, September 2, 2013
[13] "Increasing demand to shift to forefront of gas story: ConocoPhillips analyst," Platts, September 11, 2013.
[14] "Long-term gas prices poised to jump on global demand, economy: JPMorgan exec," Platts, September 10, 2013.
[15] "2013 Strategic Directions in the North American Natural Gas Industry Report," Black & Veatch, October 13, 2013.
[16] "Geopolitics of Post-Peak Oil and Shale Gas," Eurasia Group (Pg. 26), November, 2013.

IV. The Department of Energy should halt further LNG export approvals to conduct a comprehensive study of market impacts and develop legal standards

In the applications approved so far, DOE has relied on vague criteria that it adapted from the guidelines used to review natural gas *import* applications in 1984. In light of the situation we are in today, this approach is not adequate, appropriate or sustainable. Natural gas imports are not exports; exports raise a variety of unique economic, environmental and other strategic concerns that cannot be addressed by relying on a nearly 30 year old interpretation.

As was done for natural gas importation 30 years ago, the Department of Energy needs to develop standards that will enable it to make informed public interest determinations regarding LNG export applications. Moreover, DOE should develop these standards based on comments from U.S. stakeholders. This will lead to public interest standards for LNG exports that enable DOE to administer the law in a way that broadly optimizes outcomes for consumers, manufacturers and the U.S. economy as a whole. The current *ad hoc* approach to export applications may not be sustained by the courts – an outcome that the Department realized about import applications three decades ago.

This week, the Center for American Progress issued a paper urging the Department of Energy to conduct authoritative studies on manufacturing impacts, the adequacy of U.S. natural gas supplies and domestic energy security before approving additional export applications.[17]

The CAP report concluded: "In order to come to a robust set of policy recommendations regarding whether further quantities of LNG should be approved for export to non-FTA countries, a number of questions deserve further – and unbiased – examination."[18]

The ramifications of additional approvals of permits to export LNG are significant, and we ask you to please consider these studies and make the best decisions for the economic and national security of the United States.

[17] U.S. LNG exports: A Primer on the Process and the Debate, Center for American Progress, November 5, 2013.
[18] ibid