



Industrial Energy Consumers of America

The Voice of the Industrial Energy Consumers

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U.S. Department of Energy (FE-34)
Office of Regulation and International Engagement
Office of Fossil Energy
P.O. Box 44375
Washington, DC 20026-4375

Re: U.S. Department of Energy (DOE) Study on Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports, Docket No. 2018-12621

I. EXECUTIVE SUMMARY

The U.S. Department of Energy's (DOE) "Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports" (study) confirms that excessive volumes of LNG exports to non-free trade agreement (NFTA) countries is not in the public interest under the Natural Gas Act (NGA) and does not comply with the Data Quality Act (DQA). Both are legal issues for the DOE and for LNG export applicants that seek final approval.

The study lacks credibility due to conflicting studies from the National Economic Research Associates (NERA) and the inability of the economic models to determine whether the oil and gas industry is consuming U.S. or imported goods to produce, transport, and build LNG terminals, thereby overinflating economic growth and job projections due to LNG exports.

II. THE POLICY OF THE U.S. SHOULD BE TO EXPORT LNG VOLUMES AT LEVELS WHERE DOMESTIC PRICING IS NOT DETERMINED BY GLOBAL DEMAND. OTHERWISE, WHEN GLOBAL DEMAND INCREASES, SO WILL U.S. NATURAL GAS PRICES. THE CONSUMER LOSES THE BENEFITS OF OUR NATURAL GAS RESOURCES.

IECA is not against LNG exports. We are against excessive LNG exports that would result in U.S. prices being dictated by global demand like crude oil is today. Even though the U.S. is pumping record levels of crude oil, the American public is not benefiting from it. U.S. consumers are paying global demand driven pricing.

It should be the official policy of the U.S. to export LNG volumes to levels where demand in China, Japan, South Korea, India, and the EU will not determine our prices. This will be especially important during the winter heating season, because the largest LNG country buyers have winter when we do, which could result in price spikes for heating and electricity. Also, buyers of LNG are state-owned enterprises (SOEs) or government regulated utilities with automatic cost pass through.

The DOE is failing to appreciate that LNG is different from exports of crude oil in a very important way. When we export natural gas, we are lowering the cost of natural gas to our manufacturing competitors in other countries and increasing our domestic costs – a double negative impact. You are making it harder for us to compete, invest capital, and create high paying middle class jobs. Crude oil exports do not have these effects.

Finally, let's look at jobs. In 2017, according to the Bureau of Labor Statistics (BLS), the oil and natural gas industry employed 512,100 jobs. The manufacturing sector employs 12,713,000 jobs. Of that total, energy-intensive trade-exposed industries (EITE) (IECA members) that would be most affected by LNG exports employ 5,125,600 employees. The point is –that you could double or triple the number of people employed by the oil and gas industry due to LNG exports and it is still a small job creator. But, if the DOE gets this wrong and approves too many export terminals and natural gas prices rise, DOE puts at risk trillions of dollars of manufacturing assets and over 12.7 million jobs.

III. INDUSTRIAL ENERGY CONSUMERS OF AMERICA (IECA)

IECA is a nonpartisan association of leading manufacturing companies with \$1.0 trillion in annual sales, over 3,700 facilities nationwide, and with more than 1.7 million employees. It is an organization created to promote the interests of manufacturing companies through advocacy and collaboration for which the availability, use and cost of energy, power or feedstock play a significant role in their ability to compete in domestic and world markets. IECA membership represents a diverse set of industries including: chemicals, plastics, steel, iron ore, aluminum, paper, food processing, fertilizer, insulation, glass, industrial gases, building products, automotive, independent oil refining, and cement.

IV. COMMENTS

- a. **Exporting up to 30.7 Bcf/day of LNG by 2040 cannot be in the public interest because doing so would increase natural gas prices above what they would have been but for excessive LNG exports to NAFTA countries.**

The Supreme Court has stated that “in order to give content and meaning to the words ‘public interest’ as used in the [Federal] Power and [Natural] Gas Acts, it is necessary to look to the purposes for which the Acts were adopted. In the case of the Power and Gas Acts it is clear that the principal purpose of those Acts was to encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices.”¹ Furthermore, the 1976 Supreme Court case “FPC v. Hope Gas Co” said the, “primary aim” of the Natural Gas Act is “to protect consumers against exploitation at the hands of natural gas companies.”²

The Supreme Court has thus made clear that the key assessment for DOE in considering whether an LNG export is in the “public interest” is whether that export would promote “plentiful supplies of electricity and natural gas at reasonable prices”³ for domestic consumers. And if LNG

¹ NAACP v. Fed. Power Comm'n, 425 U.S. 662, 669-70 (1976).

² FPC v. Hope Gas Co., [320 U. S. 591](#), 610 (1944)

³ Id.

exports threaten the plentiful supply of natural gas at reasonable prices, they cannot be in the public interest within the meaning of the Natural Gas Act.

The study's most likely scenario assumes that LNG exports up to 30.7 Bcf/d could increase prices 117 percent above today's Henry Hub prices by 2040 and 44 percent above the EIA AEO 2018 price (which assumes only 14.5 Bcf/d of LNG exports). Such price hikes plainly threaten the plentiful supply of natural gas at reasonable prices for domestic consumers. Therefore, LNG exports to NAFTA countries of this magnitude are not in the public interest, a violation of the Natural Gas Act.

Page 14 of the study says, "The more likely range of LNG exports in 2040 was judged to range from 8.7 to 30.7 billion cubic feet per day (Bcf/d), which translates into 3.2 to 11.2 trillion cubic feet (Tcf) per year." Page 54 states that "For all the reference supply scenarios in the more likely range, natural gas prices could be from \$5 to \$6.50 per MMBtu in 2040. These mid-range scenarios have a combined probability of 47%." This is the highest probability the study has given any scenario. The EIA AEO 2018 reference case pegs Henry Hub natural gas prices at \$4.50 MMBtu in 2040 and but assumes LNG export volumes of only 14.5 Bcf/d.

There is a tendency for the study to emphasize the national net economic benefit of LNG exports. Doing so is not consistent with the Supreme Court definition of public interest. The Supreme Court's focus on availability and price is about impacts to people, not GDP.

Page 67 of the study says that there are net economic benefits for U.S. households but this claim is almost entirely hinged on one thing, revenue from the export of LNG and the resulting financial benefits to shareholders. IECA takes the position that a future revenue stream from LNG exports cannot predict the level of dividends paid out to shareholders or whether a share price will rise. NERA does not disclose the economics behind this claim. The study says that the projected shareholder income would offset higher domestic energy costs for natural gas-related shareholder households, but not for households who are not shareholders. For this reason alone, LNG exports create household winners and losers.

The number of households who would have meaningful income from LNG exports is a relatively small portion of the population. Gallup states that only 52 percent of U.S. adults own shares in stock equities. And, according to TD Ameritrade, oil and gas-related stock equities are approximately less than 5 percent of total U.S. stock equities.

The study also cites a second economic benefit that offsets household economic losses due to higher energy costs, namely an increase in the value of the dollar due to LNG exports. Page 65 says that, "Overall, consumers will pay lower prices for imported goods because of the [LNG] wealth transfers that increase the value of the dollar."

First of all, the goal of every member of Congress and this Administration is to export, not import more finished products. Why would the U.S. want to increase the trade deficit? Second, shipping LNG lowers the costs of energy to manufacturing companies in foreign countries which in turn improves their ability to compete with U.S. manufacturing companies. In fact, this study says that LNG exports slows the growth of U.S. manufactured goods, especially those that are natural gas intensive. Thirdly, it is speculative that LNG exports would actually increase the value of the dollar. There are far more greater influences to changes in the dollar's value.

IECA highlights key points that the study makes which illustrate how increased LNG exports to NAFTA countries are inconsistent with the public interest.

1. Page 69. The public's price of natural gas and electricity increases.
2. Page 69. Growth slows for manufacturing industries relative to what they would have had but for LNG exports.
3. Page 71. Reduced ROE for other industries relative to what they would have had but for LNG exports.

The study admits it has major short-comings that are important because they deal with wages and capital investment.

Quotes from the study:

Page 71. Regarding changes to wage rates by industry

"None of the details about sector-specific labor or capital needed to project changes in labor and capital income attributable to increases in LNG exports are contained in the NERA model."

Page 71. "Value-added is by definition of the sum of labor income and capital income, but the basic structure of the NERA model does not provide enough detail on the specialized skills and capital required in different industries (industries meaning non-LNG export related industries) to allocate the increase in value added between labor and capital."

Page 73. "It should be noted that since the NERA does not differentiate wage rates or human capital between sectors..."

b. The study uses a proprietary and non-reproducible economic model that violates the Data Quality Act (DQA).

The Data Quality Act passed through Congress in Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554, HR 5658)⁴ and mandates that agencies ensure "maximizing the quality, objectivity, utility, and integrity of information (included statistical information) disseminated by Federal agencies" to the public. The study uses a NERA proprietary economic model. Third party economists have concluded that the results of the study are not reproducible, a requirement of the DQA. The study also fails to achieve other DQA requirements such as objectivity and integrity. Therefore, the study cannot be used in decision-making by DOE or otherwise legal issues are raised.

The DOE's "Final Report to the Office of Management and Budget on Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by the Department of Energy"⁵ sets specific guidelines that must be met for the quality of information

⁴ Treasury and General Government Appropriations Act for Fiscal Year 2001(Public Law 106-554)
<https://www.fws.gov/informationquality/section515.html>

⁵ https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-DOE-67FR62446OMBquality.pdf

to be distributed to the public. Under the DOE guidelines, the study qualifies as “influential,” meaning that it may result in an annual effect on the economy of \$100 million or more.

The guidelines, some of which are provided below, provide specific and important definitions. The study fails to meet these DQA standards.

- “Reproducibility: means the capability of being substantially reproduced, subject to an accepted degree of imprecision, and with respect to analytical results, “capable of being substantially reproduced” means that independent analysis of the original or supporting data using identical methods would generate similar analytical results, subject to an acceptable degree of imprecision or error.”

DOE’s own guidelines say, “At minimum, DOE Elements should assure reproducibility for those kinds of original and supporting data according to “commonly accepted scientific, financial, or statistical standards.”

- “Objectivity: means the information is presented in an accurate, clear, complete, and unbiased manner and the substance of the information is accurate, reliable, and unbiased. The guidelines require formal, independent, external peer review.”
- “Integrity: means the information has been secured and protected from unauthorized access or revision, to ensure that the information is not compromised through corruption or falsification.”

The DOE says that the study was peer reviewed. But, it is likely that every one of the individuals have or will receive financial benefits from the oil and natural gas industries, with the exception of John Staub of the EIA. IECA seeks clarity from the DOE on this point. Independent objectivity and integrity is needed to validate that the economic model and whether its assumptions are sound regardless of their understanding of the oil and gas business, and not slanted to support the views of those who desire to export substantial volumes of LNG.

The DQA guidelines say that “peer reviewers be expected to disclose to agencies prior technical/policy positions they may have taken on the issues at hand, (c) per reviewers be expected to disclose to agencies their sources of personal and institutional funding (private and public sector), and (d) peer reviews be conducted in an open and rigorous manner.”

IECA has requested documentation from the Office of the Chief Information Officer to ensure that each individual has disclosed their financial association with the oil and gas industry and that the DOE was fully compliant to the DQA. IECA seeks information via the Freedom of Information Act (FOIA). IECA seeks inquiry to the Office of Management and Budget (OMB). Finally, IECA seeks a correction under the DQA.

c. The study lacks credibility. Conflicting NERA report conclusions.

The NERA June 25, 2012 study, “Why Forecasting Natural Gas Prices Is Difficult” admits that it is not possible to forecast natural gas prices with any accuracy. How is it then that this study has any credibility to justify approval of LNG exports to NAFTA countries and comply with the public interest standard?

This subject is very important for many reasons, but especially because DOE gives legal approval to LNG export for periods of 20 to 30 years. That is a very long time and a lot can happen that cannot be anticipated today. These long-term unknown factors add price risk to the consumer and the public interest.

The June 25, 2012 study accurately sheds light on what every natural gas producer and consumer knows – that natural gas prices are impossible to forecast with any accuracy. However, what has absolute certainty is that when U.S. natural gas prices become connected to global demand, like crude oil is today, price risk increases dramatically. That price risk is entirely laid upon the shoulders of the U.S. consumer.

The study illustrates the folly of depending upon long-term studies to inform decision-making on how many applications to export should be approved.

The Executive Summary on page 1 of the June 25, 2012 study states:

Past forecasts of natural gas prices have been very inaccurate because they failed to anticipate changes in the many unpredictable factors that affect natural gas supply and demand. Current and future forecasts face the same problem.

Modeling of fundamentals has been successful in identifying how changes in different factors would affect natural gas prices but not in forecasting future natural gas prices.

History is replete with examples of grossly inaccurate forecasts of natural gas prices in the short term and long term. Forecasts have consistently missed major turning points in prices trends as well as being far off on future levels of prices.

Even efforts to generate a range of price forecasts have failed to capture the true level of uncertainty as, for the most part, actual prices have fallen outside even the high and low price scenarios produced by EIA.

d. The study overestimates job creation due to LNG exports.

A simple example is steel, one of the largest products of use in producing, delivering, and building LNG export terminals. The NERA model assumes that the steel would be made in the U.S., thereby creating jobs and increasing economic activity. Not so. As we have all seen in the press, the oil and gas industry and those building LNG terminals admit that they are against President Trump’s steel tariffs. Why? Because they are importing the majority of the steel.

The same holds true for all of the products consumed by the oil and gas and export terminals. The economic model cannot delineate imports from products produced domestically that are

consumed by the natural gas related industries. Therefore, the study overestimates the economic benefits and jobs from LNG exports.

Page 76 of the study contains the assumption that U.S. industries that supply the natural gas and LNG export businesses will benefit and “partially offset” and “a decline in investment by other sectors that experience slower rates of increase in sectorial output.”

- e. The U.S. should never export LNG to countries that subsidize natural gas to their manufacturing industries. Doing so directly damages the competitiveness of U.S. manufacturing and threatens jobs.**

On June 21, 2018, the DOE issued the “Policy Statement Regarding Long-Term Authorizations To Export Natural Gas to Non-Free Trade Agreement Countries.”⁶ Section A states, “Additionally, under section 16 of the NGA, DOE is authorized to “prescribe, issue, make, amend, and rescind such [export] orders ... as it may find necessary or appropriate... to satisfy its statutory responsibilities.” IECA requests that the DOE issue an order that would specify that it is unlawful for U.S. LNG exports to be shipped to countries that subsidize natural gas to their manufacturing industry.

The term subsidize is defined as a foreign government and/or foreign government related entities that in whole or part, are either owned, controlled or regulated by such government entities, provide natural gas to their industrial and or electric generating sectors at prices that are below the market or purchased costs.

Sincerely,

Paul N. Cicio
President

⁶ <https://www.federalregister.gov/documents/2018/06/21/2018-13427/policy-statement-regarding-long-term-authorizations-to-export-natural-gas-to-non-free-trade>