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DOE: Freeport LNG Expansion, L.P.;) FE Docket No. 21-98-LNG
FLNG Liquefaction, LLC; FLNG)
Liquefaction 2, LLC; and FLNG)
Liquefaction 3, LLC; Application for)
Long-Term Authorization to Export)
Liquefied Natural Gas to Non-Free)
Trade Agreement Nations)

NOTICE OF INTERVENTION, PROTEST AND COMMENT, NOTICE OF INTERVENTION

The Office of Fossil Energy and Carbon Management (FECM) of the Department of Energy (DOE) gives notice (Notice) of receipt of an Application (Application), filed on September 10, 2021, by Freeport LNG Expansion, L.P.; FLNG Liquefaction, LLC; FLNG Liquefaction 2, LLC; and FLNG Liquefaction 3, LLC (collectively, FLEX). FLEX requests authority to engage in additional long-term, multi-contract exports of domestically produced liquefied natural gas (LNG) in a volume equivalent to 88 billion cubic feet per year (Bcf/yr) of natural gas from the Freeport LNG Liquefaction Project (the Liquefaction Project) at the Freeport LNG Terminal on Quintana Island near Freeport, Texas, to non-free trade agreement (NFTA) countries. FLEX filed the Application under the Natural Gas Act (NGA). The U.S. Department of Energy (DOE) has not yet issued a final order on the pending application.

I. Industrial Energy Consumers of America (IECA)

IECA is a nonpartisan association of leading manufacturing companies with \$1.1 trillion in annual sales, over 4,200 facilities nationwide, and with more than 1.8 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, pharmaceutical, building products, automotive, independent oil refining, and cement.

II. The application to export is not in the public interest under the NGA. Therefore, IECA opposes approval of the application.

Assuring U.S. natural gas and electricity reliability is DOE's number one responsibility. Existing cumulative LNG approval volumes already jeopardize both natural gas and electric reliability.

The DOE must never sacrifice U.S. natural gas and electric reliability for LNG exports. But that is what DOE has done by approving export volumes of 58.2 Bcf/day (Bcf/d) to NFTA agreement countries through 2050. The volume is over 57 percent of 2020 natural gas gross production and about 70 percent of net available natural gas. Net available natural gas is a more realistic way of measuring impact. It subtracts the gas that is not

available for consumption from gross production. Net supply subtracts existing pipeline and LNG exports, lease and plant fuel, pipeline, and distribution use. The remaining natural gas is what is available for either domestic use or exports.

We ask a fundamental question, under the NGA, is it in the public interest to increase natural gas production, pipeline, and storage capacity by 57 or 70 percent to accommodate the approved DOE NFTA export demand? Is increased production and thousands of miles of new pipelines necessary to accommodate such an export increase in the public interest?

We do not think so. Especially when you consider that the financial benefits of exports are limited to just a handful of exporting companies. The fact is that this small group of companies receive tremendous financial benefits, while increasing the cost of natural gas and electricity for everyone else in the country.

U.S. consumers and the economy should be a priority for domestic natural gas resources over LNG exports and foreign countries who are buyers. For years, the U.S. was dependent upon other nations for energy. Now that we have energy independence, we have handed it over to foreign nations to dictate our domestic natural gas reliability and prices. Importantly, we are shipping away the U.S. manufacturing competitive advantage.

In July 2020, the DOE extended all LNG export approvals for 30 years to 2050, which shifts all market and price risks to U.S. consumers and away from LNG exporters.

No one can forecast energy supply and demand for a 30-year period. The DOE's actions to extend LNG export terminal approvals to 30 years, shifts all of the risks of supply and prices onto domestic consumers and reduces risks to LNG exporters and countries that would receive the LNG. The DOE policy gives LNG exporters and foreign countries guarantees of access to our market, without guarantees of a reliable supply for domestic consumers. The DOE's actions allow exporters to do long-term planning to build more export terminals. The reverse is true for manufacturing companies who have growing reasons to question whether reliable supply and pipeline capacity will be available for new investment in the U.S.

The global LNG market is not a free-market. U.S. consumers cannot compete with foreign government-controlled entities who have market-power and can pay any price for LNG, no matter how high. We cannot.

U.S. consumers cannot compete on price with foreign government-controlled entities who have market-power in the purchase of LNG. The DOE LNG studies never consider this important fact. The U.S. market is a free-market - the global LNG market is not.

Foreign government state owned enterprises (SOEs) and their regulated utilities can pay any price, no matter how high to keep the lights on in their countries. They can and will buy-away U.S. natural gas which we need to operate our manufacturing facilities. They have automatic cost pass-through and several governments set their domestic prices for

natural gas and electricity below costs. Because of these advantages, they have unfair market power over domestic consumers. For U.S. homeowners, this means higher costs for heating and electricity. For the manufacturing sector, the consequences are much greater.

If domestic production cannot always exceed total U.S. and export demand, to where there is no surplus of supply, the global LNG market price begins to set the marginal cost of LNG for ALL U.S. natural gas and directly sets the marginal price of electricity nationwide.

The DOE LNG studies used to evaluate the public interest determination under the NGA, never considered availability of pipeline capacity.

The seriousness of the ongoing decline in available pipeline capacity cannot be overstated. Pipeline capacity has not expanded at the same rate as LNG exports and the DOE's approved export volumes. All three of the DOE LNG export studies used to justify increased LNG exports did not consider pipeline capacity. By itself, this is a reason to reevaluate the public interest determination of export volumes. The DOE approved NFTA exports equal to 58.2 Bcf/d without knowing what pipeline capacity is available, jeopardizes domestic natural gas and electric reliability.

We know that LNG exporters have locked-up firm pipeline capacity. This decreases pipeline capacity that is available to domestic consumers. Once locked up, domestic consumers do not have access to it. If a manufacturer wants to build a new facility, it may not have sufficient pipeline capacity and the plans for construction will be terminated.

The problem is that new interstate pipelines are not getting built, they are getting cancelled. Potential new FERC regulatory changes to pipeline permitting and certain anti-fossil energy states and activists, could make it even harder and more time consuming to build or expand needed interstate pipelines and take-away pipeline capacity.

For example, the Marcellus and Utica are two significant sources of natural gas supply. S&P Global Platts reports that only 2.0 Bcf/d of spare pipeline capacity is available.

The DOE has an obligation to know whether there is adequate pipeline capacity to deliver previously approved LNG exports before new applications are considered. To consider new export volumes, the DOE must undertake a comprehensive evaluation of pipeline capacity at peak demand.

This is not to be taken lightly. Look what happened last winter, especially in Texas due to a winter storm, a peak demand scenario in which 210 people died. The Texas Governor had to request that the LNG exporters stop exporting. We raise the question whether the Texas Governor would do the same again if a severe winter storm hit the Midwest and East Coast.

Existing approved applications should be conditioned to protect U.S. reliability.

The DOE should condition all approved NFTA and FTA export applications to give DOE the ability to ratably reduce export volumes in the event of reliability concerns. The DOE should never let national natural gas inventories fall to levels that cannot assure the public interest of reliability.

This is especially important during the winter heating season, because the countries who buy the largest share of U.S. LNG have winter when we do, which could result in price spikes for heating and electricity.

Only surplus natural gas should be allowed for export.

The DOE LNG export policy and approvals have never put U.S. reliability, consumers, the economy, and national security as a priority. We urge the DOE to change from an LNG export driven policy to one that places the U.S. economy first and exports second. We urge you to change your policy and adopt one that would only allow surplus natural gas to be exported. This assures that there is reliability for the domestic market.

The Natural Gas Act requires that LNG export volumes to NFTA countries must not be inconsistent with the public interest all of the time. It is NOT a one-time test.

The DOE must act with the intent of the NGA. The intent is to protect the U.S. public interest. LNG exports must always be in the public interest every day. It is not a one-time test. It has to be this way because domestic market conditions change rapidly. Examples of critical factors that can and have changed are drilling volumes, pipeline capacity availability, domestic demand, federal laws that govern access to federal land, pipeline permitting, regulation of methane, and state laws and regulation.

The DOE's policy of promoting competition in the marketplace by allowing commercial parties to freely negotiate their own trade arrangements directly damages U.S. manufacturing ability to negotiate free trade (fair trade) deals for export of our products.

IECA is opposed to the current arrangement that allows LNG export companies to essentially negotiate their own trade arrangements. The current process ignores the impact to the U.S. manufacturing sector. We are shipping gas to countries that U.S. manufacturing is in direct competition. Plus, many of these countries control energy prices and subsidize energy to increase the competitiveness of their own manufacturing sectors.

The policy gives NFTA countries the natural gas they want without giving the U.S. manufacturing sector a level playing field for our products. The current policy takes away a vital incentive to come to the negotiating table so that we extract more benefits for the U.S. economy. This is the reason the NGA distinguishes between FTA and NFTA countries. Congress put a priority on shipping to FTA countries.

The policy ignores value-added economics. Shipping LNG as a commodity to China allows Chinese manufacturing to use the natural gas to produce value-added products that

are of much greater value than the commodity. Those value-added products are then exported to the US. China captures the value-added economic benefits. If we have FTAs with countries, U.S. manufacturing will use natural gas to produce value added products here and export them. This allows the economic gains of investments and job creation to occur in the U.S.

Excessive LNG exports puts the entire U.S. manufacturing sector, which contributes \$2.2 trillion in GDP and 12.5 million high paying jobs, at risk. An LNG export terminal employs only about 300 employees.¹ And, employment in the oil and gas industry is less than one million and that number has decreased in recent years.

DOE lifecycle of GHG's perspective on exporting LNG from the U.S.

In its evaluation of GHG lifecycle, the DOE needs to consider the carbon intensity of imported manufacturing products. The EIA and the EPA GHG data consistently show that U.S. manufacturing carbon intensity is either the lowest or near the lowest in the world. If we manufacture products in the U.S. and export them, we are reducing global GHG emissions. We are backing-out carbon intensive imports. But, our ability to do so is predicated on natural gas reliability and prices that will allow us to compete. Excessive LNG exports threatens our ability to compete.

In 2020, the U.S. imported \$2,068,294,186,165 of manufactured products as compared to exports of only \$1,168,191,098,141.² China was the largest exporter to the U.S. and they have a carbon intensity about three times higher than U.S. manufacturing. With sound LNG export policy that supports growth in the manufacturing sector, we can increase investment and high paying jobs in the U.S.

Other environmental impacts. If natural gas is not available, the manufacturing sector will have to use fuel oil or propane, according to the EIA Manufacturing Energy Consumption Survey (MECS). Switching to electricity has both economic and technology barriers.

Manufacturing's single largest use of natural gas is as a boiler fuel to make steam energy that is used to operate the facility. If natural gas is not available due to reliability of supply, the only other fuels that can be used are fuel oil and propane. Few facilities have these back up options of supply ready. These alternatives require permitting and expensive new fuel storage capabilities. Use of fuel oil and its emissions are not desirable.

Every four years, the EIA conducts the Manufacturing Energy Consumption Survey (MECS). The EIA surveys approximately 15,000 manufacturing establishments from a national sample representing 97 to 98 percent of the payroll and this represents at least

¹ Value Added by Industry, U.S. Bureau of Economic Analysis (BEA), www.bea.gov; and Employment, Hours, and Earnings from the Current Employment Statistics survey, U.S. Bureau of Labor Statistics (BLS), www.bls.gov

² <https://tse.export.gov/tse/TSEOptions.aspx?ReportID=1&Referrer=TSEReports.aspx&DataSource=NTD>

that same percentage of manufacturing energy consumption. The MECS survey is mandatory and completed by individual companies. The survey covers the energy use for 21 three-digit manufacturing subsectors and 50 industry groups, as defined by the North American Industry Classification System (NAICS). The EIA has conducted the MECS periodically since 1985 and the 2018 MECS is the 10th iteration and most recent survey. Importantly, the MECS is the only nationally representative source for estimates of energy-related characteristics, consumption, and expenditures for manufacturing establishments in the U.S.

The data confirms that manufacturers cannot switch from natural gas to electricity. Manufacturing companies have increased their use of renewable energy and will continue to do so as long as it is cost-effective for use in existing equipment designed for electricity. However, in most instances they simply cannot switch from natural gas to electricity.

The manufacturing sector has thousands of different types of equipment used in very diverse operations. The 2018 MECS report explains that manufacturing equipment designed to use natural gas cannot operate using electricity, nor can such equipment simply be converted to use electricity. Additionally, the per Btu cost of electricity is on average much more expensive than natural gas, so even if manufacturers could run all their equipment on electricity, it would be cost-prohibitive.³

The DOE's LNG export-driven policy has resulted in excessive LNG export approvals that permanently change the U.S. natural gas, electricity, NGLs, and pipeline market's reliability for the worse and drives inflation.

More than just natural gas is negatively impacted by excessive LNG exports. Prior to excessive LNG exports, U.S. supply and demand determined reliability and prices. All sellers and buyers competed on a level playing field. With excessive LNG exports, unless production can always increase to meet the needs of additional LNG export volumes and provide a surplus of supply for the domestic market, availability and prices will be dictated by demand from foreign countries. Likewise, unless there is always excess natural gas pipeline capacity, after accounting for increased LNG export demand, U.S. consumers will not have the capacity they need. As exports grow, short- and long-term impacts will be more severe.

Increased natural gas prices have significant inflationary impacts on the economy. The price of natural gas also impacts the cost of electricity and natural gas feedstocks, which are used to produce chemicals and plastics. Natural gas power generation sets the marginal cost of power, which means that when natural gas prices rise so does the price of electricity. For example, in the report PJM Real-Time Energy Market in 2020, natural gas generation was 72.3 percent of marginal resources.⁴ PJM is the largest electricity wholesale market. The implications are significant nationwide.

³ U.S. Energy Information Administration (EIA) MECS 2018

⁴ State of the Market Report for PJM,

http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2020/2020-som-pjm-vol2.pdf

Increasing natural gas prices negatively impact the U.S. economy. For example, natural gas prices directly impact the price of natural gas liquids (NGLs) that are used as a feedstock, not a fuel. The price of natural gas directly correlates to the price of NGLs. As prices for natural gas go up, so does NGLs, which increases the raw material costs of chemicals and plastics, which are used across the economy, causing inflation. Natural gas is used to produce nitrogen fertilizer. In this case, it is the farmers and food production that are impacted. Steel, aluminum, and cement are all large consumers of energy, and this directly impacts the construction and auto industries. There are many more examples of the negative impacts of higher natural gas prices on the manufacturing sector.

U.S. consumers do not have an alternative. We are captive consumers.

When it comes to purchasing off the shelf consumer goods and services, U.S. consumers have alternatives, but not when it comes to natural gas. This is especially an important issue for the manufacturing sector. The EIA studies have shown that equipment which is using natural gas, cannot be switched to electricity.⁵ Plus, nearly half of all U.S. households heat primarily with natural gas. The EIA states that they expect households that use natural gas as their primary space heating fuel will spend \$746 this winter, a 30 percent increase from what they spent last winter. A combination of flat U.S. natural gas production and record-high levels of LNG exports have resulted in below-average storage levels and upward pressure on prices.⁶

There is no federal reliability oversight of the natural gas market and the pipeline capacity needed for delivery to consumers.

Unlike the electricity market where Congress granted the North American Electric Reliability Corporation (NERC) nationwide market reliability oversight, there is no such organization for natural gas. For electricity, nationwide reserve generation capacity is readily transparent to the market. For pipelines, no federal agency knows how much reserve pipeline capacity is available.

Because of the long lead times necessary to put a new pipeline into service, it is vital to know whether there is sufficient capacity to serve increasing domestic and export demands, especially at peak winter and summer demand. Since over 40 percent of U.S. power generation is natural gas-fired, both natural gas and electricity reliability are at stake.

Other LNG export countries do not have a large manufacturing sector at risk. The U.S. does.

The two largest LNG exporting nations are Australia and Qatar, in that order. Neither have a large domestic market for natural gas. Neither have large manufacturing sectors. LNG exports puts the entire U.S. manufacturing sector, which contributes \$2.2 trillion in GDP and 12.5 million high paying jobs, at risk. In 2020, Australia had 830,519

⁵ 2018 Manufacturing Energy Consumption Survey, U.S. Energy Information Administration (EIA), pages 14-15 <https://www.eia.gov/consumption/manufacturing/pdf/MECS%202018%20Results%20Flipbook.pdf>

⁶ EIA Winter Fuels Outlook https://www.eia.gov/outlooks/steo/special/winter/2021_Winter_Fuels.pdf

manufacturing jobs and Qatar had only 85,000.⁷ An LNG export terminal employs only about 300 employees.⁸

The BP Statistical Review of World Energy report sums it up nicely. As a percent of global natural gas consumption, Australia is at 1.1 percent and Qatar is at 0.9 percent, while the U.S. is at 21.8 percent. Furthermore, the U.S. has only 6.6 percent of global natural gas reserves.⁹

Natural gas, electricity, and natural gas feedstock prices have significantly increased, driven by a year over year increase in LNG exports.

As stated above, natural gas production has not increased at the same rate as LNG exports and national inventory levels are below the five-year average. If there were no LNG exports, the U.S. would have sufficient supply and prices would not have been impacted. A safety valve would have prevented this from happening.

When LNG exports increase without a corresponding increase in production and pipeline capacity, domestic prices increase and national security becomes at risk. Consumers cannot rely upon increasing domestic supply of natural gas and pipeline capacity. Therefore, it is prudent to reduce LNG exports to levels that assure a surplus supply to the benefit of the domestic market and the economy. We look forward to meeting with you to discuss the creation of a consumer safety valve.

III. IECA Comments on the U.S. Department of Energy (DOE) Study on Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports

The U.S. DOE's "Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports" study confirms that excessive volumes of LNG exports to NAFTA 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 to address.

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.

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

⁷ Australia, <https://www.abs.gov.au/statistics/industry/industry-overview/australian-industry/latest-release#data-download>, Qatar, <https://assets.kpmg/content/dam/kpmg/qa/pdf/2021/04/tl-qatar-industrial-landscape-2.0-resilient-and-stronger.pdf>

⁸ Value Added by Industry, U.S. Bureau of Economic Analysis (BEA), www.bea.gov; and Employment, Hours, and Earnings from the Current Employment Statistics survey, U.S. Bureau of Labor Statistics (BLS), www.bls.gov

⁹ Statistical Review of World Energy, 2021, Page 38 <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2021-full-report.pdf>

increases, so will U.S. natural gas prices. U.S. consumers lose 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. That is also what happened in Australia on LNG exports. Australian consumers are paying the Asia net-back price. They pay the landed cost of LNG to Asia, minus the transportation costs, less the liquefaction and processing costs in Australia. This means that Australian consumers are not economically benefiting from their domestic resources. This is what we can expect in the U.S. with larger export volumes, without increasing production and pipeline capacity. For crude oil, even though the U.S. is pumping record levels, 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 limit export LNG volumes to what is surplus to domestic demand.

The DOE study fails 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.

Exporting up to 30.7 Bcf/d 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.”¹⁰ 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.”¹¹

The Supreme Court has thus made clear that the key assessment for the 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”¹² for domestic consumers. And if LNG exports threaten the plentiful supply of natural gas at reasonable prices, they cannot be in the public interest within the meaning of the NGA.

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

¹⁰ NAACP v. Fed. Power Comm’n, 425 U.S. 662, 669-70 (1976).

¹¹ FPC v. Hope Gas Co., [320 U. S. 591](#), 610 (1944)

¹² Id.

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 NGA.

Page 14 of the study states, “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.” On page 54 it goes on to state 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.

Fast forward to today, we have seen October Henry Hub prices jump to the \$6.00 per MMBtu level in just the last few months. Because of warmer weather since then, they have come down from those levels. But they are still twice what prices have been for the last five years.

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’s 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 states 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.

There is only six LNG exporting companies to give dividends to shareholders. Whatever dividends that they give is only going to an insignificant volume of our total population. IECA has examined the dividend payouts and they are small and less than what the average stock pays.

The study states 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 an insignificant 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 admits that energy costs will increase. 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 states that, “Overall,

consumers will pay lower prices for imported goods because of the [LNG] wealth transfers that increase the value of the dollar.”

This has not happened. Imported product prices have increased, not decreased. This was a flawed theory. It ignores that LNG exports increase domestic natural gas and electricity prices, which increases the cost to U.S. manufacturing and the goods we produce.

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 states that LNG exports slow 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 change 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 the shortcomings deal with wages and capital investment. Both of which are negatively impacted by increased LNG exports.

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...”

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

The DQA passed through Congress in Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-554, HR 5658)¹³ 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 the DOE or otherwise legal issues are raised. But, the DOE did use this study to justify significant new LNG export approvals.

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”¹⁴ sets specific guidelines that must be met for the quality of information 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. LNG export impacts exceed \$100 million.

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.”

¹³ Treasury and General Government Appropriations Act for Fiscal Year 2001(Public Law 106-554) <https://www.fws.gov/informationquality/section515.html>

¹⁴ https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-DOE-67FR62446OMBquality.pdf

- “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 states that the study was peer reviewed. However, it is likely that every one of the individuals received 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 are 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. In 2021, we are still waiting for a review that never came.

The DQA guidelines state 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 with 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.

As of December 2021, IECA has not received a correction under the DQA.

Finally, it has always been troubling that during the period of the study and subsequent years, the top legal counsel for the DOE LNG program had worked as the Executive Director for the LNG exporting industry prior to working for the DOE.

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 the DOE gives legal approval to LNG exports for periods of up 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 consumers 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 U.S. consumers.

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.”

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 the majority of the steel is imported.

The same holds true for all of the products consumed in the construction of export terminals or production of natural gas, such as drilling equipment or steel for pipelines. 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.”

The U.S. should never export LNG to countries that subsidize natural gas to their manufacturing sector. 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.”¹⁵ 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, that provide natural gas to their industrial and/or electric generating sectors at prices that are below the market or purchased costs.

Thank you for the opportunity to comment. We look forward to hearing from you.

Sincerely,

Paul N. Cicio
President & CEO
Industrial Energy Consumers of America (IECA)
1776 K Street, NW Suite 720
Washington, DC 20006
202-223-1661
pcicio@ieca-us.org
www.ieca-us.org

¹⁵ <https://www.federalregister.gov/documents/2018/06/21/2018-13427/policy-statement-regarding-long-term-authorizations-to-export-natural-gas-to-non-free-trade>

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) (2013).

Dated at Washington, D.C., this December 7, 2021.

By: *Paul Cicio*
Paul N. Cicio
President & CEO
Industrial Energy Consumers of America
1776 K Street, NW Suite 720
Washington, DC 20006
202-223-1661
pcicio@ieca-us.org
www.ieca-us.org