Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC; Application for Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations Docket No. 19-124-LNG

NOTICE OF INTERVENTION, PROTEST AND COMMENT

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The application seeks to increase the volume of LNG for which Cheniere Marketing, LLC and Corpus Christi Liquefaction, LLC (Cheniere) requests export authorization for the equivalent of 108.16 billion cubic feet (Bcf/year) of natural gas. 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 \$1.0 trillion in annual sales 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, pharmaceutical, building products, automotive, independent oil refining, and cement.

II. COMMUNICATION AND CORRESPONDENCE

All communications and correspondence concerning this application, including all service of pleadings and notices, should be directed to the below individual.

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

III. THE REQUEST FOR AUTHORIZATION IS NOT IN THE PUBLIC INTEREST UNDER THE NATURAL GAS ACT (NGA) AND SHOULD BE DENIED.

The NGA requires that shipments to non-free trade agreement (NFTA) countries must not be inconsistent with the public interest. This application to export LNG to NFTA countries is inconsistent with the public interest.

The DOE has approved about 31.2 Bcf/d of cumulative volume, equal to about 38 percent of 2018 demand to NFTA countries and 56.0 Bcf/d or 68 percent to FTA countries. The NGA public interest standard applies to <u>cumulative</u> NFTA LNG export application volumes. The DOE has approved these applications to export for 20-30 years, substantially increasing supply and price risk to all U.S. consumers and the economy. There is great uncertainty about future adequate domestic supply at reasonable prices and available pipeline capacity. Despite the substantial risks to U.S. consumers and the economy, the DOE continues to approve more LNG export volumes to NFTA countries.

It is inconsistent with the public interest under the NGA to not retain a competitive advantage for U.S. manufacturing. Instead, the DOE has committed itself to approve every LNG export application. IECA encourages a measured approach that assures U.S. competitive advantage.

The DOE's actions to approve <u>every</u> LNG application exporting to NFTA countries threatens the U.S. manufacturing sector long-term, a sector that contributes \$2,321.2 billion to the U.S. economy, 11.3 percent of U.S. GDP¹ and 13 million jobs. Our global competitiveness is dependence upon low-cost natural gas, feedstock, and natural gas-fired power generation. According to the BLS, the oil and gas industry contributes only \$236.8 billion to the economy, just 1.2 percent of U.S. GDP and employs only 415 thousand jobs, less than 4 percent of that of manufacturing. Even if LNG exports double or triple the oil and gas employment, it still pales in comparison to the economic importance of the manufacturing sector. The DOE cannot afford to get this wrong and put trillion of dollars of manufacturing assets at risk.

It is not in the public interest for the DOE to authorize LNG shipments to NFTA countries who subsidize energy prices to their manufacturers and power generators. But, in fact, that is what the DOE is authorizing. The DOE is authorizing the shipment of natural gas to these countries, some of the natural gas was produced on federal lands owned by the American people, from which NFTA countries subsidize or reduce the price of natural gas and electricity to their manufacturers and power generators, which increases their ability to compete with U.S. manufacturers. That is NOT "America First."

The DOE is conducting reviews of authorizations as if the market assumptions never change or have not changed. In fact, things have changed. Among other things, the availability of natural gas pipeline capacity for the domestic consumer has changed. There is a serious growing problem of inadequate natural gas pipeline capacity today and going forward, as significant LNG export capacity comes online.

The DOE, nor this application, has determined that there is adequate natural gas pipeline capacity for the domestic market at normal demand or at peak demand, for the volume of this application and/or for the cumulative NFTA volumes that the DOE has already approved. LNG export volumes <u>decrease</u> available pipeline capacity for the domestic market because the exported natural gas is going offshore to supply other countries,

¹ U.S. Bureau of Economic Analysis, U.S. Department of Commerce: <u>www.bea.gov</u>

not U.S. consumers. By the end of 2019, LNG exports will have reduced available pipeline capacity by nearly 10 Bcf/day.

Concern is justified. The National Petroleum Council report of December 2019 states, 'The United States has a vast oil and natural gas infrastructure network, but existing infrastructure has been modified and adapted to near capacity." The report continues, "However, there are rising levels of opposition to permitting and siting of new and modified infrastructure. Some major projects have been delayed or impeded, and the trend is concerning."

The Interstate Natural Gas Association of America's (INGAA) Foundation released a June 2019 report which states that 26,000 miles of natural gas pipeline is needed by 2035, only fifteen years from now,² an average of 1,400 miles of new pipeline placed in service each year. According to the Federal Energy Regulatory Commission (FERC), 5,762 miles of interstate pipelines have been placed in service from 2010 to 2019, an average of 640 miles per year, less than one-half of what INGAA states is needed.³

FERC Interstate Natural Gas Pipeline Data for Last 9 Years				
2010	Placed in Service	30	11.9	1,188.9
2011	Placed in Service	30	12.5	1,765.4
2012	Placed in Service	26	3.9	307.4
2013	Placed in Service	27	4-5	226.5
2014	Placed in Service	2	0.2	9.05
1015	Placed in Service	31	7-5	394-2
2016	Placed in Service	37	7.1	391.7
2017	Placed in Service	32	12.0	773.0
2018	Placed in Service	26	13.0	689.1
2019	Placed in Service	9	4.8	16.6
fotals				5,762

For year to date 2019, the FERC has approved 15 permits amounting to just 540.88 miles of pipeline. In 2018, FERC approved 687.51 miles of pipeline. Again, less than one-half of what INGAA says the nation needs.

² INGAA: North America Midstream Infrastructure through 2035; <u>https://www.ingaa.org/File.aspx?id=34658</u>

³ Federal Energy Regulatory Commission: <u>https://www.ferc.gov/industries/gas/indus-act/pipelines.asp</u>

The availability of natural gas pipeline capacity is central to reliability and affordability of natural gas and electricity to the U.S. and the competitiveness of the entire manufacturing sector, which employs 13 million people. If there is not enough pipeline capacity, it does not matter how much natural gas resources are in the ground. Not having sufficient pipeline capacity threatens trillions of dollars of existing manufacturing assets.

Manufacturers are already suffering from inadequate pipeline capacity regionally. And, the FERC has numerous pipelines that have been approved and are not getting placed in service for a variety of reasons.⁴ Everyone recognizes that it is getting harder, not easier, to build pipelines, yet the DOE and this application has not considered the availability of pipeline capacity.

No study has been undertaken to examine whether there is adequate pipeline capacity to export approved LNG export volumes at normal demand or at peak summer or winter demands, without natural gas or electric reliability disruption to the domestic market. Nor has any study been completed to determine whether there is adequate storage capacity. Not doing such studies and risking reliability is inconsistent with the public interest.

No study has been undertaken to examine price impacts of the seasonal demand of LNG exports and its price impacts on natural gas pipeline costs to the consumer and the price of natural gas and electricity, both of which are priced on the margin. Eighty-eight percent of all LNG consuming countries have winter when we do, which means their winter demand could increase price volatility and drive-up U.S. natural gas and electricity prices.

As Congress considered the NGA years ago and the treatment of LNG exports and the public interest, they assumed that there would be adequate natural gas pipeline capacity to serve the domestic market. In considering the public interest, it is unthinkable that Congress would risk reliability of the electric grid, making sure homes have heat in the winter, air conditioning in the summer, and that manufacturers have pipeline capacity sufficient to invest and grow jobs in exchange for allowing this applicant to export LNG. Therefore, Congress intended that the U.S. public interest should come first and LNG exports second. The DOE is putting LNG exports first and U.S. consumers second, which is not in the public interest.

Exporting the requested volume, plus the cumulative LNG exports to NFTA countries that the DOE has already approved, means that the low U.S. domestic price of natural gas will, with time, become connected to the higher global price of LNG long-term, just as crude oil is today. No study has been undertaken to determine the price impacts of connecting the U.S. domestic price to the global price. The low cost of natural gas and the resulting low relative price of electricity are critical competitive advantages for our ability to invest in the U.S., thus creating jobs and competing with global competitors.

⁴ Natural Gas Pipelines, FERC, <u>https://www.ferc.gov/industries/gas/indus-act/pipelines.asp</u>.

Importantly, the global LNG market is not a free market⁵ and buyers of LNG who will compete with U.S. consumers for natural gas on the basis of price are state-owned enterprises (SOEs) and foreign government-controlled utilities (FGCUs) with automatic cost pass-through. Automatic cost pass-through means that they are not price sensitive. However, U.S. consumers are price sensitive. SOEs and FGCUs sole missions are to ensure their countries have sufficient natural gas supplies, and because they have automatic cost pass-through they have the ability to pay any price, no matter how high, to secure natural gas supplies. When global LNG demand exceeds global supply, these entities have *market power* to buy natural gas at any price necessary to keep their countries operating. No study has been undertaken to determine the price risk and economic impact of this *market power*. Approving LNG exports to these types of entities is inconsistent with the public interest.

NFTA countries are the largest buyers of LNG and it is NFTA countries that discriminate against the importation of U.S. manufacturing goods and farm products. On this subject the DOE LNG export studies do confirm that energy-intensive manufacturers would be economically harmed.⁶ The DOE studies admit that U.S. LNG exports lower the price of natural gas to other countries and result in improvement of their competitiveness, thereby negatively impacting U.S. manufacturing competitiveness. The studies also specifically name the energy-intensive trade-exposed (EITE) industries as those being damaged. These industries are members of IECA. Despite this, the DOE has NEVER not approved an LNG export application for shipment to NFTA countries, which is inconsistent with the public interest.

The FERC's State of the Markets Report from April 2019 contradicts the DOE/FE Order No. 4197 and the DOE's use of EIA's AEO Outlook assessments of adequate supply. In 2018, demand exceeded supply, storage levels fell to dangerous levels, and electric prices rose.⁷

"In 2018, natural gas demand reached a record high, driven primarily by increased demand for natural gas-fired generation and liquefied natural gas (LNG) export growth. Record high demand was accompanied by record high production, with the largest growth from the Marcellus Shale and the Permian Basin. <u>However</u>, demand growth outpaced production growth, resulting in consistently lower-thanaverage storage levels that at times were the lowest in more than a decade. Low storage contributed to rising natural gas prices across the nation, although pipeline additions helped to broadly distribute growing production and ease tightness in some markets. In the electric markets, day-ahead on-peak prices increased across the country, reflecting the general increase in natural gas prices."

⁵ "WoodMac: Uncontracted demand by world's seven largest LNG buyers to quadruple," LNG World News, December 13, 2018, <u>https://www.lngworldnews.com/woodmac-uncontracted-demand-by-worlds-seven-largest-lng-buyers-to-quadruple/?utm_source=emark&utm_medium=email&utm_campaign=daily-update-lng-world-news-2018-12-14&uid=55872</u>

⁶ The Macroeconomic Impact of Increasing U.S. LNG Exports; Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports; The Macroeconomic of LNG Exports from the United States ⁷ State of the Markets Report 2018, FERC, https://www.ferc.gov/CalendarFiles/20190418105357-A-3-

<u>report.pdf</u>

The INGAA Foundation Inc. report supports the IECA position that LNG exports have substantial negative impacts to pipeline capacity availability, commodity and pipeline transportation costs to consumers, and significant seasonable peak demand and price impacts.⁸ All of these concerns have not been studied by the DOE.

INGAA report: Up to 13 Bcf/d of take-away capacity from the Marcellus/Utica and 8 Bcf/d from the Permian Basin will be needed to transport this production to markets in the Gulf Coast, Florida, the Southeast, and New England.

IECA: FERC confirms that several pipelines already approved are years behind in getting completed and some are being cancelled.

INGAA: LNG export terminal operators/tollers. These entities seek firm access to large low-cost gas production basins to supply gas to an LNG terminal.

IECA: Firm access pipeline arrangements lock in pipeline capacity for exporters and reduces available pipeline capacity for domestic consumers.

INGAA: Under the Balanced Future Scenario, eight LNG export terminals will be in operation in the Gulf Coast by 2040, with close to 9.2 Bcf/d of demand for incremental feed gas by 2020 and another 4.1 Bcf/d by 2040. The Atlantic Coast LNG terminals at Cove Point and Elba Island, will add 1.0 Bcf/d of feed gas demand by 2021 and remain flat through 2040. *This incremental gas demand will significantly affect the daily and seasonal utilization of pipelines along the eastern seaboard and the service offerings needed to meet the requirements of these LNG terminals.*

IECA: There is inadequate pipeline capacity along the eastern seaboard right now and this becomes more severe during peak seasonal winter demand.

INGAA: Higher ambient temperatures will require more feed gas to produce the same amount of LNG. The variation of daily feed gas could approach 12 percent during the peak summer months, which will translate into over 2 Bcf/d of extra feed gas demand on certain days.

IECA: First, this means that LNG demand will be higher than what the DOE/EIA is saying, due to higher temperatures in the Gulf Coast. This also means that LNG exports will cause greater price and demand volatility during the summer months.

INGAA: Additional gas storage or pipeline no-notice services will be needed to help mitigate the types of intra-day swings that already have been observed at existing LNG liquefaction terminals.

IECA: Intra-day swings are already being observed even at the existing lower LNG export volumes. These swings impact consumer costs.

⁸ "The Role of Natural Gas in the Transition to a Lower-Carbon Economy," The INGAA Foundation, May 2019.

INGAA: The destination markets for the LNG terminals currently under construction are in Asia and Europe. Because of significant seasonal demand variability in both markets, the volume of U.S. LNG exports could vary significantly. High U.S. demand for natural gas during the peak winter months to serve residential and commercial load *could place additional stress on the existing natural gas infrastructure, requiring new infrastructure to serve LNG exports for the global market*.

IECA: This is additional confirmation that there is inadequate pipeline capacity and of predicted significant seasonal demand variability, which also means price volatility for both natural gas and electricity. Many export terminals have dedicated lateral pipelines to serve the export facility. Export terminals still rely on the same interstate pipelines that all other consumers rely upon.

INGAA: For a Gulf Coast LNG liquefaction train, the feed gas rate can fluctuate throughout the day and seasonally. LNG liquefaction operators or tollers will need daily balancing services on pipelines and/or use instantaneous, no-notice storage services to mitigate diurnal feed gas rate swings in both directions.

Pipeline imbalance tolerances will allow a shipper to flow typically within +/-2.5 percent of daily variation; however, the daily swings for LNG liquefaction feed gas rates are expected to far exceed those thresholds during summer months. *Even if pipelines allowed a 5 percent nomination tolerance, the average daily variation would exceed that limit seven months of the year.*

IECA: This illustrates the disruption and volatility for seven months out of the year.

The CFTC report of May 2018 also issued warnings regarding LNG exports and their impacts to increased prices and volume and price volatility. The Executive Summary states:

"Aside from limited pipeline gas traded with Canada and Mexico, U.S. natural gas has been relatively insulated from international market dynamics. Increasing exports of LNG from the U.S. may mean that the domestic market will be influenced more by global forces." And, under its three conclusions it says, "U.S. LNG export growth may put upward pressure on domestic (US) natural gas prices and expose a heretoofore relatively isolated North American market to global market dynamics."⁹

The NGA requires that shipments to NFTA countries must not be inconsistent with the public interest. Every U.S. DOE LNG export study shows that the public does not benefit from LNG exports and in fact, are damaged by them. Instead of considering the negative impact to the public, the DOE has focused on "economic net benefit" and markets as their interpretation of whether LNG exports are not in the public interest.

⁹ "Liquefied Natural Gas Developments and Market Impacts," CFTC, May 2018, <u>https://www.cftc.gov/sites/default/files/2018-05/CFTC_LNG0518_3.pdf</u>

Figure 2 was taken from the DOE's report entitled, "Macroeconomic Impacts of LNG Exports from the United States," and illustrates that LNG exports create winners and losers. Natural gas producers and exporters are the winners and everyone else in the U.S. economy are losers, clearly illustrating that LNG exports are not in the public interest.

Figure 2 also makes clear that LNG exports are in the interest of the natural gas producers and LNG exporters, a small and narrow portion of the U.S. economy, and not in the interest of the public. Natural gas costs increase, wages decrease, capital investment decreases, especially in manufacturing, and there is a reduction in indirect economic income.

Today's U.S. natural gas market price is delinked from global markets and pricing impacts and it is for this reason U.S. consumers are benefiting from lower prices. Lower prices have resulted in significant investment and good paying jobs in the manufacturing sector across the country. As U.S. LNG exports grow, the low U.S. natural gas price (Henry Hub \$3 MMBtu) will become connected to the high global LNG prices (historical Asian prices \$9-12 MMBtu), which increases the marginal price, increasing both natural gas and electricity prices for the entire U.S. market.

This is what has happened in Australia. The Australian example shows that using *market determined* levels of LNG exports is not in the public interest. The DOE is using *market determined* level methodology to justify approval of ALL LNG applications.

Australia started exporting LNG in 1989 and now has 70.65 MTPA of capacity operating and 16.95 MTPA under construction. Like the U.S., Australia has vast natural gas resources with growing production. Historically the consumer prices have been around \$3.00 MMBtu. Now, because of LNG exports, the Australian consumer pays the *Asian LNG net back price*. This means that the Australian consumer pays the high Asian LNG price, less transportation and liquefaction costs, which has resulted in Australian domestic consumer prices at \$8, \$9, and \$10 MMBtu. The net result is that Asia's LNG market sets the price for every Australian citizen, rather than the supply and demand of the Australian natural gas market. The Australian domestic market is no longer a free market and they no longer benefit from their vast natural gas resources.

The Australian Competition and Consumer Commission started publishing LNG netback prices in order to boost price transparency.¹⁰ The Australian consumer net back prices have increased from 7.27 Gj in 2017 to 10.69 Gj YTD 2018, a 47 percent increase. In approving LNG export terminals, the Australian government let markets determine the volume of exports, which has now directly caused disastrous impacts to consumers and the manufacturing sector as jobs continue to decrease.

IV. THE NATURAL GAS ACT (NGA) REQUIRES THAT SHIPMENTS TO NFTA COUNTRIES MUST NOT BE INCONSISTENT WITH THE

¹⁰ "Australian watchdog starts LNG netback price publication," October 2018, LNG World News <u>https://www.lngworldnews.com/australian-watchdog-starts-lng-netback-price-publication/?utm_source=emark&utm_medium=email&utm_campaign=daily-update-lng-world-news-2018-10-05&uid=55872</u>

PUBLIC INTEREST. A U.S. GOVERNMENT ACCOUNTABILITY OFFICE (GAO) REPORT¹¹ MAKES CLEAR THAT NEITHER CONGRESS NOR THE DOE HAS EVER DEFINED THE "PUBLIC INTEREST." DOE IS USING GUIDELINES DEVELOPED IN 1984 FOR LNG IMPORTS TO INFORM LNG EXPORT PUBLIC INTEREST DECISIONS.

The GAO report entitled, "Federal Approval Process for Liquefied Natural Gas Exports," dated September 2014 includes the following statement on page 11.

"In passing the NGA, Congress did not define 'public interest;' however, in 1984, the DOE developed policy guidelines establishing criteria that the agency uses to evaluate applications for natural gas imports. The guidelines stipulate that, among other things, the market, not the government, should determine the price and other contract terms of imported natural gas. In 1999, DOE began applying these guidelines to natural gas exports."

In 1984, LNG imports were needed and they reduced risks for domestic consumers and manufacturers. Imports of LNG were in the public interest. The reverse is true for LNG exports. LNG exports increase risk and especially market-determined LNG export levels by increasing consumer prices and reliability risks. Therefore, criteria used for decision making in 1984 on LNG imports is inconsistent with what Congress had intended under the NGA, and should not be used to inform decision making on LNG exports.

There is an explicit intent of Congress, in their asserting the requirement that LNG exports to NFTA countries must not be inconsistent with the public interest. And importantly, they were referring to *cumulative* LNG export volumes, not incremental volumes. When Congress passed the NGA and included the above-mentioned public interest provision, there is no mention of markets as a predicate for determining levels of exports, nor net economic benefits.

The U.S. 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."¹² Furthermore, the Court also stated that the "primary aim" of the NGA is "to protect consumers against exploitation at the hands of natural gas companies."¹³ LNG exports exploit U.S. consumers when low domestic prices rise due to high global LNG demand.

The DOE's interpretation and use of public interest is inconsistent with the Administration's own use and understanding of the words *public interest*. On March 24, 2019, U.S. Attorney General Barr submitted his summary of The Special Counsel's

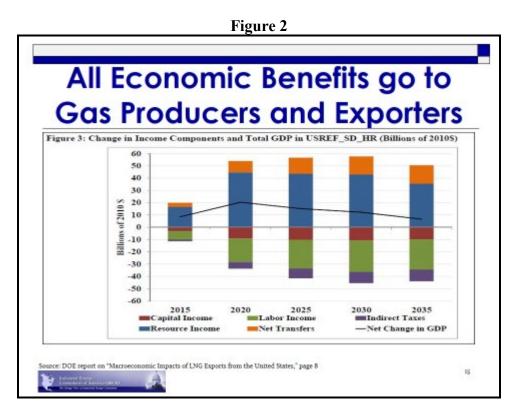
¹¹ "Federal Approval Process for Liquefied Natural Gas Exports," U.S. Government Accountability Office (GAO), September 2014.

¹² NAACP v. Fed. Power Comm'n, 425 U.S. 662, 669-70 (1976).

¹³ FPC v. Hope Gas Co., 320 U. S. 591, 610 (1944).

Report¹⁴ to Congress. Attorney General Barr states, "Although my review is ongoing, I believe that it is in the *public interest* to describe the report and to summarize the principal conclusions reach by the Special Counsel and the results of his investigation."

Barr's use of *public interest* in this important document is not misunderstood by anyone. The public interest is about people. It is not about *net economic benefit* nor *markets*. To be in the public interest means it is to the benefit of the public. As stated above, LNG exports do not benefit the public. This is a core legal vulnerability for the DOE and LNG export applicants.



U.S. consumers are benefiting by a U.S. natural gas market that is a free market, whereby domestic demand versus domestic supply is resulting is low relative natural gas prices. And, U.S. consumers are benefiting from our vast natural gas resources.

Why market-derived demand cannot and should not be used to justify levels of specific LNG export applications volumes like this one, or cumulative volumes of LNG exports is illustrated today with U.S. crude oil and gasoline prices.

U.S. crude oil prices are connected to the global market. If global market prices increase, so does U.S. gasoline, fuel oil, and jet fuel prices. Global demand from other countries are dictating demand and price versus the U.S. supply and demand. This can and will happen to natural gas if our low natural gas prices are connected to the high price of

¹⁴ Attorney General Barr, The Special Counsel's Report, March 24, 2019 <u>https://judiciary.house.gov/sites/democrats.judiciary.house.gov/files/documents/AG%20March%2024%202</u> 019%20Letter%20to%20House%20and%20Senate%20Judiciary%20Committees.pdf

global LNG markets. It is it for this reason that connecting the low U.S. price of natural gas to the high global market price is NOT in the public interest. This is what happened in Australia as noted above.

The DOE study entitled, "Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports"¹⁵ illustrates that LNG exports would substantially increase U.S. natural gas prices. Page 54 of the reports states that "for all the reference supply scenarios in the more likely range, natural gas prices could be from \$5.00 to \$6.50 per MMBtu in 2040. These mid-range scenarios have a combined probability of 47%." This is the highest probability the study gave any scenario. Since today's Henry Hub price is roughly \$3.00 MMBtu, the study confirms that natural gas prices could more than double causing domestic natural gas prices to rise to a level which would harm energy-dependent manufacturers and every homeowner. Consumers do not have an alternative. This is clearly not in the public interest.

There is all pain and no benefit for the public. The DOE report confirms that market determined U.S. LNG exports will connect U.S. prices to higher global LNG prices. The DOE report says that LNG exports will reduce the price that Asian countries pay and increase U.S. prices and eventually our prices will reach parity with Asia. At that point, the U.S. will have lost its competitive advantage. The report is explicit in highlighting the economic damage to especially manufacturing companies who are large users of natural gas. Importantly, manufacturers will have lost their competitive advantage, with very serious long-term implications for a viable manufacturing sector, jobs, and investment.

IECA wishes to intervene and be made a party to this proceeding, with all of the rights attendant to such status pursuant to 10 C.F.R. 590.303(b).

¹⁵ "Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Export," U.S. Department of Energy (DOE), June 7, 2018, <u>https://www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202</u>018.pdf.

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 20th day of December 2019.

By:

licio Euld

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