The American Consumer Institute
Center for Citizen Research

Before the
Department of Energy
Washington, DC 20585

In the matter of requests for comments for the 2024 LNG Export Study: Energy, Economic, and Environmental Assessment of U.S. LNG Exports (released December 17, 2024)

Comments of the American Consumer Institute

The American Consumer Institute (ACI) is a nonprofit 501(c)(3) education and research organization. Its mission is to identify, analyze, and protect the interests of consumers in legislative and rulemaking proceedings. ACI promotes market-driven solutions that maximize economic growth and support consumer welfare. A strong, robust economy benefits all individuals; energy is a pivotal piece of that equation. ACI advocates for policies that bolster energy abundance, reliability, and affordability in order for households and businesses to not only live but thrive.

ACI is submitting these comments regarding the recently released Department of Energy (DOE) study ("Study") entitled Energy, Economic, and Environmental Assessment of U.S. LNG Exports.[1] Commissioned by the Biden administration following a pause placed on future export contracts, the Study hoped to clarify potential economic and environmental effects of liquified natural gas (LNG), as there were concerns that expanding the industry would negatively impact gas prices and emissions.

The pause on LNG exports has been lifted since the swearing in of a new administration one year later. ACI supports lifting the ban and favors a continued expansion of the industry into additional markets. The United States plays a critical role in LNG, having become a significant supplier to a growing number of markets across the globe. Natural gas is crucial to providing reliable energy at low costs and has been instrumental in reducing carbon emissions both here and abroad. As global energy demand continues to surge, maintaining and expanding LNG exports will be vital to meeting these needs.

Some of the Study's findings diverge from other available data and analyses. These comments endeavor to shed light on discrepancies, identify deficiencies, and emphasize the integral role U.S. LNG plays, both domestically and internationally.

[1] U.S. Department of Energy, "2024 LNG Export Study: Energy, Economic, and Environmental Assessment of U.S. LNG Exports," December 17, 2024, https://fossil.energy.gov/app/docketindex/docket/index/30.

LNG's Relevant Contributions to the Global Economy

Non-existent just a decade ago, LNG has swelled into a multi-billion-dollar industry impacting nations around the world. Roughly 55 countries engage in LNG trade, with new markets opening every year.[2] The global world-wide market was valued at USD 135.21 billion in 2023 and is likely to reach USD 284.10 billion by 2032.[3]

The U.S. is a major player in the global LNG realm, becoming the top exporter in 2023 by reaching 13 billion cubic feet per day (bcf/d) in production.[4] Providing more than one-fifth of global supply, U.S. LNG has contributed $408 billion to the nation's GDP and supported an average of 273,000 domestic jobs since 2016. It is considered one of the fastest growing industries for U.S. exports.

In 2024, 55 percent of total U.S. LNG exports went to Europe, 34 percent to Asia, and 11 percent to Latin America.[5] A few cargoes went to the Middle East, mainly to Egypt and Jordan. Nearly half of Europe's LNG comes from the U.S;[6] the war in Ukraine triggered Europe to decrease its shipments from Russia and rely more on America.

Global natural gas consumption increased by roughly 2.8 percent in 2024 and is expected to increase another 2.3 percent in 2025.[7] Despite concerns that natural gas supplies will run out sooner than anticipated, this does not seem to be the case.

According to the U.S. Energy Information Agency (EIA), U.S. natural gas "proved reserves" have increased almost every year, thanks in large part to major advances in exploration and production technologies like horizontal drilling and hydraulic fracturing.[8] The most recent report indicates that the U.S. has 691 trillion cubic feet in reserves, which is the equivalent of approximately 86 years' worth of natural gas.[9] A 10 percent increase from the previous year's report, EIA predicts the figures to continue increasing year after year. Improved seismic imaging and drilling techniques allow for more accurate detection and extraction of natural gas in previously inaccessible areas.

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[2] U.S. Energy Information Administration, "Three More Countries Began Importing Liquified Natural Gas this Year, and More Will Follow," August 30, 2023, https://www.eia.gov/todayinenergy/detail.php?id=60262.
[3] Introspective Market Research, "LNG Market-Comprehensive Study Report and Recent Trends," August 2024, https://introspectivemarketresearch.com/reports/lng-market/.
[4] Daniel Yergin, Carlos Pascual, Michael Stoppard, et al, "Major New US Industry at a Crossroads: A US LNG Impact Study – Phase 1," *S&P Global*, December 17, 2024, https://www.spglobal.com/en/research-insights/special-reports/major-new-us-industry-at-a-crossroads-us-lng-impact-study-phase-1.
[5] Curtis Williams, "U.S. LNG exports soar in December, lifting full-year growth by 4.5%," *Reuters*, January 2, 2025, https://www.reuters.com/business/energy/us-lng-exports-soar-december-lifting-full-year-growth-by-45-2025-01-02/#:~:text=In%202024%20Europe%20accounted%20for,and%20Jordan%2C%20LSEG%20data%20showed.
[6] Ana Maria Jaller-Makarewizc, "European LNG Tracker," Institute for Energy Economics and Financial Analysis, September 16, 2024, https://ieefa.org/european-lng-tracker-september-2024-update.
[7] International Energy Agency, "Global Gas Security Review 2024," October 2024, https://iea.blob.core.windows.net/assets/fa115714-f9f8-4727-8520-5e8b5ca265ad/GlobalGasSecurityReview2024.pdf.
[8] U.S. Energy Information Administration, "Natural Gas Explained," July 16, 2024, https://www.eia.gov/energyexplained/natural-gas/how-much-gas-is-left.php.
[9] U.S. Energy Information Administration, "U.S. Crude Oil and Natural Gas Proved Reserves, Year-end 2022," April 29, 2024, https://www.eia.gov/naturalgas/crudeoilreserves/.

S&P Global predicts LNG exports to more than double from just a little more than the current 13 bcf/d to 28 bcf/d by 2030.[10] By 2040, LNG's tremendous growth is expected to contribute $1.3 trillion to GDP, $2.5 trillion in revenues for U.S. businesses, over $900 billion in expenditures, and $165 billion in tax revenues while also supporting an average of nearly 500,000 U.S. jobs. The LNG industry is a significant contributor to the national economy.

The same S&P report also predicts that halting this potential growth puts at risk more than 100,000 U.S. jobs per year and over $250 billion in GDP. Any future industry expansion comes at minimal costs to consumers (due to our extensive supplies) which will be "many times exceeded by the economic benefits" the nation receives through further LNG expansion.[11]

Shell Incorporation forecasts global LNG demand to grow by more than 50 percent by 2040.[12] While Europe intends to decrease their imports, Asian countries will absorb most of this expansion as they switch out coal for natural gas and support their surging economic growth.

Likewise, data and analytics company Wood MacKenzie finds that the global LNG market will be increasingly supplied by the U.S.[13] Asia will be the key region for growth, nearly doubling their demand through 2050, especially as emerging markets utilize this cost-effective and reliable energy source. The U.S. stands to supply roughly one-third of all global LNG needs by mid-century.

U.S. LNG has become an important component of the entire industry, contributing to the global economy by producing countless jobs, prosperity, and tax revenue on top of much-needed energy for many of our allies abroad.

LNG Does Not Affect Domestic Gas Prices

The Study asserts that if U.S. exports increase then domestic natural gas prices will also increase and hurt consumers, projecting that by 2050, prices could inflate domestically by 30 percent. Current data and trends say otherwise.

EIA claims that in 2023, record high LNG exports coincided with low average prices of $2.57 per million British thermal units (MMBtu), well below the 2010–2015 (pre-LNG exports) average of $3.64 per MMBtu.[14] The increase in global natural gas demand was met with increased domestic production. Therefore, the key to low domestic prices amid LNG export growth is robust gas supply. Global events, such as COVID-19 and Ukraine's war with Russia, created periods of inconsistency and instability over the

[10] Daniel Yergin, 2024.
[11] Ibid.
[12] Shell Global, "Global LNG Demand to Grow Beyond 2040," February 13, 2024. https://www.shell.com/news-and-insights/newsroom/news-and-media-releases/2024/global-lng-demand-to-grow-beyond-2040.html.
[13] Wood Mackenzie, "Asia LNG Demand Assessment," October 2024, https://angeassociation.com/wp-content/uploads/2024/12/Wood-Mackenzie-LNG-Demand-Study-Extended-Executive-Summary.pdf.
[14] U.S. Energy Information Administration, "U.S. Henry Hub natural gas prices in 2023 were the lowest since mid-2020," January 4, 2024, https://www.eia.gov/todayinenergy/detail.php?id=61183#:~:text=We%20estimate%20that%20U.S.%20dry,than%20the%202022%20annual%20average.

last few years; but overall trends demonstrate relatively low natural gas prices amid growth in LNG exports.

EIA also shows that when adjusted for inflation, U.S. residential natural gas prices from 2016-2023 show very little variation.[15] Even when exports went from nonexistent in 2015 to 200 bcf in 2019, natural gas prices declined. This is because natural gas production has increased 43 percent since 2015, meeting both domestic *and* foreign demand.[16]

The International Energy Agency (IEA) recently indicated that natural gas prices for the third quarter of 2024 recorded gains across key Asian and European markets compared with the previous quarter, while remaining at multi-year lows in the U.S.[17]

A previous DOE examination, often considered the foremost LNG study, also stated the following:

> "Available natural gas resources have the largest impact on natural gas prices. Therefore, U.S. natural gas prices are far more dependent on available resources and technologies to extract available resources than on U.S. policies surrounding LNG exports."[18]

Providing sufficient natural gas quantities to satisfy demand is the key driver to keeping prices low for consumers.

Some states and regions *have* seen electricity price increases, but those increases generally span over decades and not just the handful of years LNG has been an export. There is little to no correlation. The contributing factors to higher electricity prices include particular policy decisions mandated by state legislatures.

Studies indicate that areas experiencing rising costs have aggressively pursued net zero policies aimed at drastically reducing reliable and affordable energy sources and replacing them with intermittent wind and solar.[19] Building, operating, and maintaining the required capacity to achieve green energy goals and meet the needs of residents is extremely expensive. A significant portion of these costs are generally passed down to consumers.

A September EIA analysis states that over the past decade, the change in average residential electricity prices across the United States has generally "mirrored" the rate of inflation.[20] It further notes that

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[15] Dustin Meyer, "How DOE's LNG Exports Study Could Clash with Real-World Data," American Petroleum Institute, December 16, 2024, https://www.api.org/news-policy-and-issues/blog/2024/12/16/how-does-lng-exports-study-could-clash-with-real-world-data.

[16] U.S. Energy Information Administration, "Natural Gas," December 31, 2024, https://www.eia.gov/dnav/ng/hist/n9050us2a.htm.

[17] International Energy Information, "Global Gas Security Review," October 2024, https://iea.blob.core.windows.net/assets/fa115714-f9f8-4727-8520-5e8b5ca265ad/GlobalGasSecurityReview2024.pdf.

[18] Sugandha Tuladhar, W. David Montgomery, Paul Bernstein, et al, "Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports," NERA Economic Consulting, June 7, 2018, https://www.lngfacts.org/wp-content/uploads/sites/2/2020/09/Macroeconomic-LNG-Export-Study-2018-compressed.pdf.

[19] Mitch Rolling, Isaac Orr, and Trevor Lewis, "The Staggering Costs of New England's Green Energy Policies," Yankee Institute, November 14, 2024, https://yankeeinstitute.org/wp-content/uploads/2024/11/ISO-NE-r3b.pdf.

[20] U.S. Energy Information Agency, "Retail electricity prices closely tracked inflation over the last 10 years," September 11, 2024, https://www.eia.gov/todayinenergy/detail.php?id=63064.

potential causes for increased rates include "growing investment in transmission or distribution, higher costs for investment in new generation technologies, or rapid changes in underlying commodity prices." The report recognizes that California, which has seen some of the nation's highest rate increases, has also heavily invested in grid modernization and renewable energy sources on account of an ambitious Renewable Energy Portfolio that mandates a significant portion of their energy come from solar and wind. States with the lowest electricity rates have diversified energy portfolios.

The assertion that increasing the volume of LNG exports causes higher energy prices is not consistent with data, trends, and analysis. Increasing overall supply is the crucial element to keeping prices stable.

Overall Emissions Will Likely Decrease

The Study evaluates future emissions across a number of potential scenarios with varying degrees of export expansion. The situation that depicts the greatest increase in LNG exports subsequently produces the highest surge in emissions, but only with a slight influx of 0.05 percent.

Missing from the Study is thorough consideration of global emission decreases on account of the displacement of coal and other dirtier forms of energy. The use of natural gas has demonstrated substantial emissions reductions due to its replacement of coal, being credited for lowering cumulative carbon dioxide emissions by 62 percent over the last three decades.[21] Natural gas plants are replacing coal at accelerated rates. In Pennsylvania, for example, coal-fired electricity generation fell from 57 percent in 2001 to just 12 percent in 2021 because it was replaced with natural gas.[22]

The manufacturing and shipping of natural gas tends to be problematic for emitting byproducts, but the processes are constantly improving. Methane levels, the greatest pollution concern, continue to drop due to increased investments in pipeline infrastructure, which reduce and minimize leaks.[23] Since 1990, methane emissions have fallen roughly 70 percent in natural gas distribution systems and 35 percent in natural gas transmission and storage—despite booming demand. Methods will only continue to improve, through continued innovation and investment, resulting in further methane leak reductions.

While infrastructure may be currently limited in some countries, inhibiting a switch from coal to natural gas, it is not unimaginable to consider that modern technology and innovation will reach increasing numbers of locations. More LNG ports than anticipated could very well materialize in the coming years and decades, making it possible for more nations to transition away from heavy polluters and toward cleaner burning fuels.

The Study's assertion that LNG will displace a portion of wind and solar accentuates an underlying assumption that renewable energy will be erected in mass quantities. This premise is highly speculative and overly ambitious, particularly in Asian nations.[24] The build-out of renewables poses many challenges

[21] American Gas Association, "Natural Gas Industry Climate Change Commitments," https://www.aga.org/wp-content/uploads/2022/02/aga-climate-change-progress.pdf.
[22] U.S. Energy Information Agency, "In the past 20 years, natural gas has displaced most coal-fired generation in Pennsylvania," January 26, 2023, https://www.eia.gov/todayinenergy/detail.php?id=55319.
[23] Nicole Jacobs, "EPA: Oil and Natural Gas Methane Emissions Fall Despite Record Production," *Energy In Depth*, April 19, 2021, https://eidclimate.org/epa-oil-and-natural-gas-methane-emissions-fall-despite-record-production/.
[24] Wood Mackenzie, 2024.

such as integration into the grid, land requirements, lack of wind, and tariffs. If sufficient cost-competitive LNG is not available, these countries will likely resort to coal, which could increase emissions by 100 million tons (the equivalent to more than 20 million cars annually).

Additionally, renewable energy is often sold as a clean alternative, but research demonstrates significant environmental repercussions if extensively implemented.[25] These sources negatively impact land, species, and air through intensive mineral mining and manufacturing processes. It is questionable whether renewables are environmentally superior to natural gas.

The meager emissions increase outlined in the report is not significant enough to warrant a freeze or curtailment of LNG output. The economic and geopolitical benefits of a robust LNG industry far outweigh the slight bump in potential environmental impacts observed by the Study; however, the calculated additional emissions are likely to be offset by the positive contributions natural gas brings to energy transition efforts and decarbonization.

An appropriate balance must be struck between emissions and the economic interests of businesses and consumers.

U.S. LNG Strengthens International Relations

Global energy demand is projected to increase, especially in the electricity sector, and it is imperative to have plenty of resources at our disposal to manage the influx headed our way. Natural gas can and should play a pivotal role in meeting future challenges.

The Study rightly points to the Russia-Ukraine War as an example of the role that US exports play in increased energy security. As European countries faced high energy prices due to drastically reduced Russian LNG exports, they turned to the U.S. to help meet energy demand.

The Study also references Europe's legislation to phase out fossil fuels in favor of renewable energy and low-carbon gas. While LNG exports to Europe have slowed, newly elected leadership may alter or weaken green measures,[26] especially in the face of skyrocketing electricity prices, energy insecurity and unreliability, and deindustrialization; many experts point to a rapid transition to renewable energy as the leading cause.[27] The EU's need for inexpensive and reliable U.S. LNG could last longer than anticipated.

As developing nations continue to industrialize and improve their standard of living, more energy is required to manage the growing infrastructure and additional modern conveniences. Twenty-three percent of U.S. LNG exports are shipped to developing nations, providing affordable and reliable energy to help grow societies.[28] The U.S. provides vital energy to burgeoning countries across the globe.

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[25] Kristen Walker, "Clearing the Air: Honest Truths About Clean Energy," American Consumer Institute, August 6, 2024, file:///C:/Users/krisw/Downloads/Clearing-the-Air-Honest-Truths-About-Clean-Energy.pdf.
[26] Kate Abnett, "EU Climate Policies Could be Slowed in Future After Rightward Shift in Elections," *Reuters*, June 10, 2024, https://www.reuters.com/world/europe/uphill-road-europes-climate-plan-after-eu-election-2024-06-10/.
[27] Rupert Darwall, "The Folly of Climate Leadership: Net Zero and Britain's DISASTROUS ENERGY POLICIES," Real Clear Foundation, December 2023, https://assets.realclear.com/files/2023/12/2321_2320_realclear-report-rupert-darwall-v7_1.pdf.
[28] Daniel Yergin, 2024.

When the World Economic Forum met in January, LNG was highlighted as a critical source more countries are embracing to secure their energy.[29] Its unique flexibility allows it to be a "significant part of a balanced and equitable approach" to meeting demands and transitioning away from heavier polluting fossil fuels.

Last year's pause potentially jeopardized relationships with trading partners who have come to rely on U.S. LNG for their energy needs. Dr. James Watson, Secretary General of European trade association EuroGas, stated in a hearing "No European government….has welcomed this decision."[30] The halt generated uncertainty among our allies who began to question America's trade reliability.

Limiting LNG exports simply creates a void that global competitors will attempt to fill. Had the pause not been lifted, domestic jobs and economic opportunities would have been shipped overseas. Stymying supplies would increase LNG prices, making it difficult for some countries to purchase. Global emissions would rise since not only would some markets return to coal, but LNG extracted, produced, and shipped from the U.S. is cleaner than exports from other countries. Up to 85 percent of the energy gap derived from an extended halt would be sourced from fossil fuels outside the U.S.[31]

Maintaining and expanding our position as a global leader in the industry is crucial for providing stability in supply, pricing, and emission curtailment.

Conclusion

The role of U.S. LNG is critical in providing reliable, affordable, and often cleaner energy across the world. Many nations depend on this supply, and its absence could foster instability and insecurity in the global market. Depriving our trading partners of natural gas will force many to turn back to coal, a move which could erode any progress made in curbing global emissions. This essential resource will contribute to global energy transition efforts, reducing dependence on higher-carbon fuels, while simultaneously cultivating economic growth.

Lifting the export pause was a necessary maneuver to strengthen relationships with foreign nations while providing them with a critical resource that keeps lights on, boosts economies and/or improves the standard of living. With increasing energy demands on the horizon, LNG provides abundant, inexpensive, and reliable power.

The industry also yields significant economic benefits, contributing greatly to GDP, generating tax revenue, expanding businesses, and creating countless jobs. Stifling LNG exports would merely diminish prosperity. U.S. LNG should be allowed to flourish within the confines of the parameters already in place. It is in the interest of businesses, consumers, and global trading partners.

Thank you for the opportunity to submit these comments.

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[29] World Economic Forum, "How LNG is helping to deliver responsible energy security," January 6, 2025, https://www.weforum.org/stories/2025/01/lng-gas-energy-security/.
[30] Alec Dewar, "Industry Experts Voice Concern Over LNG Pause; Impacts on Geopolitical Stability, American Jobs, and the Environment," *Energy in Depth*, February 9, 2024, https://www.energyindepth.org/industry-experts-voice-concerns-over-lng-pause-impacts-on-geopolitical-stability-american-jobs-and-the-environment/?154.
[31] Daniel Yergin, 2024.

Respectfully,

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