

UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT

Sabine Pass Liquefaction LLC
Sabine Pass Liquefaction Stage V LLC

Docket No. 24-27-LNG

Motion to Intervene and Protest of Public Citizen, Inc.

On March 1, 2024, Sabine Pass—owned by Cheniere Energy and the private equity firms Blackstone Inc. and Brookfield Asset Management—applied for authorization to export an additional 899.46 billion cubic feet per year (Bcf/yr) of Liquefied Natural Gas (LNG) from its Stage 5 expansion of its existing facility located at the Louisiana and Texas border. When added to its current capacity, Sabine Pass would have a total export capacity of 2,561.4 Bcf/yr.

The Cheniere/Blackstone/Brookfield request must be rejected as the additional requested export authorization threatens domestic supply shortages and will result in higher and more volatile domestic energy prices, and therefore is not in the public interest.

Motion to Intervene

Public Citizen, Inc. moves to intervene in this proceeding. Established in 1971, Public Citizen, Inc. is a national, not-for-profit, non-partisan, research and advocacy organization representing the interests of household consumers. We have over 500,000 members and supporters across the United States. Public Citizen is active before the Federal Energy Regulatory Commission as an intervenor in multiple LNG facility dockets, and we frequently intervene in U.S. Department of Energy proceedings involving the export of natural gas. As one of America's largest advocacy organizations representing the interests of household consumers, we and our members have a direct interest in Cheniere's application to export natural gas because of the potential impacts such exports have on disrupting domestic supply and raising prices for consumers. Our Energy Program Director, Tyson Slocum, is an expert on energy market regulatory matters, serving as an expert witness on the Department of Energy public interest standard in testimony before the U.S. Congress in February 2023.¹ Slocum also serves on two federal advisory committees of the U.S. Commodity Futures Trading Commission (the Energy and Environmental Markets and Market Risk advisory committees). Financial details about our organization are on our web site.²

Protest

The U.S. Department of Energy is tasked by Congress to only permit exports of natural gas to non-FTA countries which are "consistent with the public interest."³ The U.S.

¹ www.citizen.org/article/house-testimony-energy-legislation/

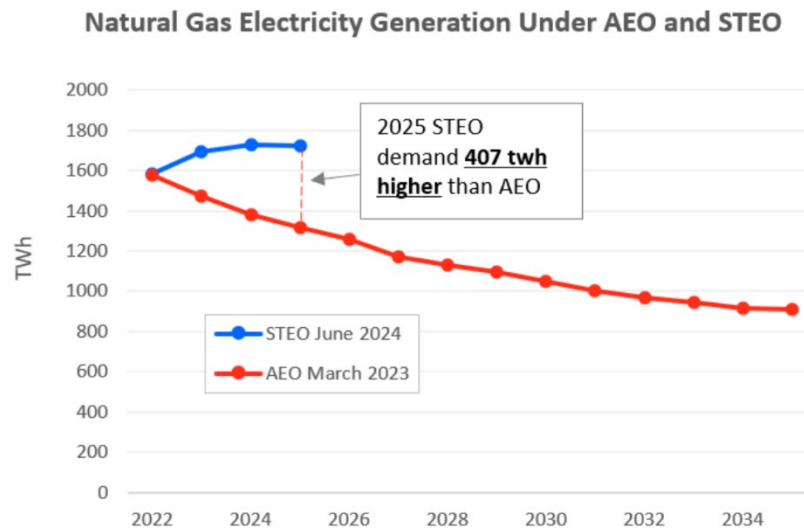
² www.citizen.org/about/annual-report/

³ 15 USC § 717b(a).

Supreme Court noted that the “primary aim” of this 86-year-old law is “to protect consumers against exploitation at the hands of natural gas companies”.⁴

The application claims that “Domestic natural gas resources are abundant, affordable, and ...are sufficient to meet both the domestic consumption demand and any expected level of LNG exports”.⁵ This is false. The application ignores the radical upheaval U.S. domestic energy markets are facing due to a combination of record LNG exports and unprecedented projected increases in domestic energy demand from data centers, and building/transportation electrification.

In the 15 months since the U.S. Energy Information Administration released its 2023 *Annual Energy Outlook*, it has revised its forecast of 2025 natural gas electricity demand up by 407 terawatt hour (TWh) in its June 11, 2024 *Short Term Energy Outlook*. What was once a projected 11% decrease in natural gas-fueled power demand from 2021-2025 is now a 16% increase, due to “expectations of power demand from data



centers”.⁶

On May 23, 2024, the Federal Energy Regulatory Commission released its *Summer Energy Market and Electric Reliability Assessment*, warning: “Nationwide, data center demand is expected to reach 35 GW by 2030, up from 17 GW in 2022, and has been one of the major drivers behind the sharp increase in electricity demand in 2023.”⁷ These estimates are confirmed by a separate McKinsey analysis.⁸ The Electric Power Research Institute estimates that data centers could consume up to 9% of U.S. electricity

⁴ FPC v. Hope Nat. Gas Co., 320 U.S. 591 (1944).

⁵ At page 26, www.energy.gov/sites/default/files/2024-03/SPL5_Application_DOE.pdf

⁶ www.eia.gov/outlooks/steo/

⁷ At page 47, www.ferc.gov/news-events/news/report-2024-summer-energy-market-and-electric-reliability-assessment

⁸ www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/investing-in-the-rising-data-center-economy

generation by 2030.⁹ Goldman Sachs expects natural gas to fuel 60% of the increased power demand from data centers,¹⁰ and projects that “US utilities will need to invest around \$50 billion in new generation capacity just to support data centers alone ... incremental data center power consumption in the US will drive around 3.3 billion cubic feet per day of new natural gas demand by 2030, which will require new [gas] pipeline capacity to be built.¹¹ Reuters reports that “[n]ine of the top 10 U.S. electric utilities said data centers were a main source of customer growth, leading many to revise up capital expenditure plans and demand forecasts”.¹² Wood Mackenzie also projects that natural gas fueled power plants will meet much of that projected power demand:

We’re forecasting much higher gas demand from power compared with two years ago. We raised our forecast for gas demand from the power sector from 2022 to reflect the difficulty the US faces in achieving its very challenging renewables build-out targets. We also edged up our forecasts for LNG exports, easily the biggest growth segment for US gas demand. The second big upgrade came last month in our latest North America gas strategic planning outlook. It takes into account the explosive growth in data centres and AI that’s unfolding, along with the reshoring of power-intensive industries such as chip manufacturing. We now expect total US gas demand to increase by 30 bcf/d by the early 2040s compared with 13 bcf/d previously.¹³

A May 28, 2024 TD Cowen report Data Centers, Generative AI & Power Constraints: the Path Forward estimates that:

non-latency sensitive workload migration, transmission upgrades, and natural gas will play a critical role in servicing incremental data center demand . . . every incremental 100MW of data center demand will require 19-25 MMcf/D of natural gas to satisfy power burn, resulting in an incremental 4.5-6.5 Bcf/D of natural gas demand by 2028, or roughly 1.3 Bcf/D+ per year, which is not an insignificant ~1.5% growth driver per year of overall natural gas demand.

RBN Energy reports:

The rise in the use of AI at data centers will significantly increase demand during the second half of this decade, according to an April report from Tudor Pickering Holt & Co. The investment bank estimated that data centers are currently consuming 11 GW, but that their demand will climb to 42 GW – nearly 4x today’s level – by 2030. The report also predicts that at least 2.7Bcf/d of incremental natural gas will be needed by 2030, and perhaps as much as 8.5 Bcf/d. TPH’s estimate for incremental gas demand compares favorably with what some in the energy industry are asserting:

- *Antero Resources, the big Marcellus/Utica gas producers, said during its Q1 earnings call that it expects natural gas demand for power generation to increase by 150%, or 14% annually—equivalent to nearly 8 Bcf/d of incremental demand —*

⁹ www.epri.com/about/media-resources/press-release/q5vU86fr8TKxATfx8IHf1U48Vw4r1DZF

¹⁰ www.cnbc.com/2024/05/15/microsofts-carbon-emissions-have-risen-30percent-since-2020-due-to-data-center-expansion.html

¹¹ www.goldmansachs.com/intelligence/pages/AI-poised-to-drive-160-increase-in-power-demand.html

¹² www.reuters.com/business/energy/us-electric-utilities-brace-surge-power-demand-data-centers-2024-04-10/

¹³ www.woodmac.com/news/the-edge/could-us-data-centres-and-ai-shake-up-the-global-lng-market/

through 2030 because of the increased power consumption by AI data centers, cryptomining and EVs.

- *EQT Corp. echoed a similar sentiment in demand during its Q1 earnings call. It expects these factors to drive the need for an incremental 10 Bcf/d of natural gas demand by 2030 and maybe as much as 18 Bcf/d. The E&P said that to help ensure that more gas can reach fast-growing demand areas in the Mid-Atlantic and Southeast it plans to expand Mountain Valley Pipeline*

Data centers are one of the most energy-intensive building types, consuming anywhere from 10 to 50 times the energy per floor space of a typical commercial office building, with electrical demand at larger facilities ranging from 100 megawatts (MW) to 300 MW, enough to power tens of thousands of homes. Data centers are pushing demand higher in large part because of AI services like ChatGPT, which require far more energy than a simple web search. (A Google search query requires about 0.0003 kWh; a ChatGPT query is estimated to need as much as 0.01 kWh — or 30X the simple search.) And it's important to note that data centers, AI and cryptocurrency operations also need a significant amount of energy to keep them cool, which can increase usage by another 10% or more . . . Dominion Energy, a major utility provider in eight states, including Virginia, estimates that data center power demand in the state will rise by 376% by 2038. It also estimates that total demand will increase by 85% during the next 14 years as more EVs, appliances and electric-powered heating and cooling units (i.e., heat pumps) are installed . . . the Tennessee Valley Authority reported that 65% of its load growth since 2019 has come from datacenters. The federally owned utility is building or has proposed the construction of eight new natural gas-fired plants to cope with the increasing demand.¹⁴

The 45th President of the United States, Donald J. Trump, is pledging in his re-election effort to promote energy-intensive cryptomining as a means to encourage greater domestic natural gas use for electricity generation.¹⁵ Indeed, Republicans are promoting rules at the national level to ensure growth of natural gas power generation to meet this growing demand. U.S. Senator John Barrasso, Republican from Wyoming, said at a recent hearing:

Data centers running artificial intelligence consume massive amounts of electricity. Some estimates suggest that electricity demand for these data centers will double between now and 2030. Whoever secures affordable and reliable electric power, China or America will have a big head start in the race for artificial intelligence. And right now, America is not positioned well. Our grid is already strained. For years, the North American Electric Reliability Corporation, NERC, has raised alarm about grid reliability. It's warned that the premature retirement of coal and natural gas-fired power plants has increased the risk for blackouts and brownouts in much of the country. Yet the retirements continue and President Biden is making the situation worse . . . We need a reliable, steady and balanced supply of electricity, nuclear, coal, natural gas and hydropower can provide that with demand poised to surge . . . Which country will lead the 21st century is still up for grabs. Much depends on how America capitalizes on the potential of artificial intelligence. The president's opposition to coal to natural gas and to even hydropower. The fuels that generate 65 percent of our

¹⁴ rbnenergy.com/storm-front-as-data-centers-proliferate-utilities-turn-to-gas-fired-power-to-meet-demand

¹⁵ Scott Waldman, *Trump enlists bitcoin to save fossil fuels*, June 13, 2024, <https://subscriber.politicopro.com/article/2024/06/trump-enlists-bitcoin-to-save-fossil-fuels-00163063>

*electricity is a white flag. It is a surrender, an act of surrender to China... So it's dangerous to force all these natural gas and coal-fired plants offline at this point.*¹⁶

At a U.S. House of Representatives hearing earlier this month, Republican Representative Jeff Duncan, Chairman of the Energy, Climate, & Grid Security Subcommittee of the House Energy & Commerce Committee, observed that America “will not be able to meet the challenge of this demand growth unless we embrace an energy expansion. This means pipelines, natural gas, nuclear and of course transmission lines.”¹⁷

Utilities across the Southeastern U.S. are experiencing unprecedented energy demand growth and responding with formal requests to increase natural gas-fueled generation capacity,¹⁸ with Dominion’s CEO saying “we’re going to need some more natural gas in order to keep the lights on.”¹⁹ East Daley Analytics estimates that 3-15 Bcf/d of additional gas demand could emerge by 2030 just to support data centers and AI machine learning facilities. And “TC Energy is seeing new demand emerge in the Midwest on the company’s [natural gas] ANR Pipeline. ANR has struck an agreement with a local distribution company to supply Microsoft’s new data center in Mount Pleasant, WI. The Wisconsin Reliability project will provide up to 144 MMcf/d of gas delivery. In our TRP Financial Blueprint, we estimate the project will contribute \$29MM in annual EBITDA to ANR Pipeline.”²⁰

Texas is implementing already-enacted legislation to provide billions of dollars in loans to finance the construction of 41 GW of new gas-fired power plants, with the state’s Republican leadership planning to further expand its state-sponsored natural gas power buildout.²¹ Indeed, just days ago, the Texas grid operator informed lawmakers that it expects the state’s power demand to nearly double by 2030.²²

Electricity demand in the Permian Basin is set to double from 2021 levels by 2030, with 58% of the demand coming from cryptomining facilities.²³ Entergy plans to rely on new gas powered generation to meet 1.2 GW of expected increased demand for southeast Texas.²⁴ U.S. power generator Vistra projects that its earnings from continuing

¹⁶ U.S. Senate Energy and Natural Resources: Opportunities, Risks, and Challenges Associated with Growth in Demand for Electric Power in the United States, May 21, 2024, www.energy.senate.gov/hearings/2024/5/full-committee-hearing-to-examine-the-opportunities-risks-and-challenges-associated-with-growth-in-demand-for-electric-power-in-the-united-states

¹⁷ House Energy and Commerce Energy, Climate and Grid Security: Powering AI: Examining America's Energy and Technology Future, June 4, 2024, <https://energycommerce.house.gov/events/energy-climate-and-grid-security-subcommittee-hearing-powering-ai-examining-america-s-energy-and-technology-future>

¹⁸ www.eenews.net/articles/southeast-utilities-have-a-very-big-ask-more-gas/

¹⁹ www.wsj.com/business/energy-oil/how-big-data-centers-are-slowing-the-shift-to-clean-energy-44ef4145

²⁰ www.eastdaley.com/media-and-news/data-center-demand-could-send-midstream-to-the-moon

²¹ www.utilitydive.com/news/more-than-41-gw-gas-projects-texas-energy-fund/717745/

²² www.kvue.com/article/news/local/texas/texas-ercot-power-demand-prediction-double-2030/269-7aab5a42-043c-421e-93d0-21ba4a7dbc1d

²³ www.eenews.net/articles/bitcoin-in-the-permian-data-centers-test-texas-grid/

²⁴ www.utilitydive.com/news/entergy-proposes-gas-fired-power-plants-1200-MW/718036/

operations will grow at an annual rate of 18% between 2022 and 2026, with its natural gas power plants fueling data centers.²⁵

Last month, AEP formally asked Ohio regulators for changes in policies to accommodate unprecedented electricity load growth from data centers and generative AI facilities locating in the state.²⁶ And Berkshire Hathaway’s NV Energy has requested state regulators approve 400 MW in new natural gas generation due to “considerable load growth in the state through 2034 as a result of rising population, electrification and the development of data centers in its service territory”.²⁷

Furthermore, the U.S. is poised to lose natural gas imports from Canada following the start-up of LNG Canada, the country's first export terminal. The Shell-led project is testing its British Columbia terminal ahead of commercial operations in mid-2025. The plant will process about 2 bcf per day of gas, or 11% of Canada's gas output.²⁸

The Requested Exports to non-FTA Nations Threatens American Consumers With Higher Prices

The application relies on a discredited and outdated 2018 *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports*²⁹ to justify its requested volume of exports. The study assumes that consumer welfare—defined as the present value measure of the standard of living of all U.S. households—was directly and beneficially linked with higher LNG exports.³⁰ The 2018 study gave only a 3% probability that significant LNG exports would result in domestic prices above \$10/MMBtu, concluding that “increasing U.S. LNG exports under any given set of assumptions about U.S. natural gas resources and their production leads to only small increases in U.S. natural gas prices.”³¹ That conclusion has already proved to be laughably wrong. Furthermore, the study claims that “as U.S. LNG exports increase ... households who hold shares in companies that own liquefaction plants receive additional income from take-or-pay tolling charges for LNG exports. These additional sources of income for U.S. consumers outweigh the income loss associated with higher energy prices.”³² This absurd conclusion assumes that the concentration of stock ownership among the wealthiest 1% of Americans is somehow evenly distributed across the population.

In reality, record LNG exports have radically upended domestic energy markets, exposing American households and businesses to higher and more volatile prices.

²⁵ www.woodmac.com/news/opinion/surging-power-demand-raises-questions-about-cost/

²⁶ www.dispatch.com/story/business/energy-resource/2024/05/14/aep-ohio-rolls-out-proposal-to-handle-surge-in-data-center-power-needs/73677235007/

²⁷ www.utilitydive.com/news/nv-energy-proposes-400-mw-gas-peakers-1-gw-solar-storage/718548/

²⁸ www.reuters.com/business/energy/us-stands-lose-canadian-natural-gas-when-lng-canada-terminal-starts-up-2024-05-03/

²⁹ www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202018.pdf

³⁰ At page 20.

³¹ At page 55.

³² At page 67.

Indeed, a May 23, 2023 analysis by the U.S. Energy Information Administration concludes that increased LNG exports directly result in higher energy prices for American consumers: “higher LNG exports create a tighter domestic natural gas market (all else held equal), increasing domestic natural gas prices”.³³ Rising LNG feedgas demand will contribute to domestic price volatility.³⁴ The Federal Energy Regulatory Commission notes that “the expansion of LNG export capability has integrated formerly disparate North American regional natural gas markets into the global market”, exposing American families to global price surges.³⁵ Public Citizen research documents that the price households paid for natural gas has increased 52% since the start of the LNG export boom in 2016.³⁶

The application omits the impact its requested exports will have on impacting Americans at different income levels. On November 9, 2023, the Biden Administration released a final guidance to improve regulatory analysis, which requires agencies to determine how regulations impact families of different incomes.³⁷ Such a *distributional analysis* is essential to determine whether an increase in LNG exports from Sabine Pass will disproportionately harm lower-income families by causing higher energy burdens.³⁸

The application omits references to recent domestic supply shortages triggered in part by surging LNG exports. During Winter Storm Uri, the State of Texas faced severe natural gas supply shortages that resulted in the Governor issuing an emergency Disaster Declaration, requesting a halt to LNG exports from the state’s largest LNG exporter.³⁹ Cheniere’s application provides no information on procedures to halt its requested LNG exports in the event of domestic gas supply shortages.

In conclusion, the Department of Energy must conclude that the application’s requested exports threaten domestic supply and prices, and therefore the request is inconsistent with the public interest.

Respectfully submitted,
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³³ *Effects of Liquefied Natural Gas Exports on the U.S. Natural Gas Market*, at page 7, www.eia.gov/outlooks/aeo/IIF_LNG/

³⁴ www.spglobal.com/commodityinsights/en/market-insights/latest-news/natural-gas/032824-us-gas-prices-to-be-increasingly-linked-to-international-markets-through-lng

³⁵ <https://ferc.gov/media/report-2022-2023-winter-assessment>

³⁶ www.citizen.org/article/the-impact-of-lng-exports-on-u-s-energy-bills-and-inflation/

³⁷ www.whitehouse.gov/omb/briefing-room/2023/11/09/biden-harris-administration-releases-final-guidance-to-improve-regulatory-analysis/

³⁸ www.citizen.org/article/letter-to-dept-of-energy-to-protect-consumers-from-lng-exports/

³⁹ www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=350574

VERIFICATION

Pursuant to 10 CFR § 590.103(b), I, Tyson Slocum, declare that I am Energy Program Director for Public Citizen, Inc. and am authorized to make this verification; that I have authored and read the foregoing filing and that the facts therein stated are true and correct to the best of my knowledge, information, and belief.

Pursuant to 28 U.S.C § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed on June 18, 2024.

Tyson Slocum

Tyson Slocum
Energy Program Director
Public Citizen, Inc.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon the applicant and intervenors for this docketed proceeding in accordance with 10 CFR § 590.107(b). Dated at Washington, DC this 18th day of June 2024.

Signed,

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