The Department of Energy's (DOE) 2024 LNG study and Secretarial Memo make dubious claims about the impact of and need for increased U.S. LNG exports

DOE Claim #1: Future LNG consumption is uncertain, and growth in U.S. exports could "quickly outpace global demand."

But keep in mind:

- The International Energy Agency (IEA) forecasts that global demand for natural gas will reach an all-time high in 2024, and they expect it to grow even more in 2025.
- **European LNG demand is down, but not out**
  - The European Union (EU) is looking to phase out its remaining Russian natural gas imports, which still account for about 15% of its consumption.
    - European Commission (EC) President Ursula von der Leyen said last month the EU is open to purchasing more U.S. LNG to replace its Russian LNG imports.
    - Similarly, EC Commissioner of Energy and Housing Dan Jorgensen vowed to sever the EU's remaining energy ties with Russia, and noted that U.S. LNG has allowed it to decrease its dependency on Russian energy.
  - Beyond the near term, Rystad Energy projects that Europe could face a natural gas supply gap in the early 2030s.
  - As the EU grapples with crumbling industrial competitiveness, its focus on reducing energy costs could drive more LNG demand.
- **Asia is also a growing market for LNG**
  - Wood Mackenzie forecasts that LNG demand in Asia will nearly double by 2050 due to economic growth and a move away from higher-emitting fuels like coal.
  - The Japanese government is urging its utilities to sign long-term LNG contracts in the name of energy security and so they can utilize their gas-fired power generation fleet "as a realistic means of transition."
  - Similarly, the non-partisan Energy Futures Initiative indicates that demand in South Asia could increase six-fold by 2050 due to growth in the industrial sector – namely refining, fertilizer and textiles – which cannot easily be electrified.
- **The bottom line**: Regardless of what the DOE study says, it's difficult to look at the real-world evidence and conclude that global demand for LNG is declining.

DOE Claim #2: Increasing LNG exports could drive domestic energy prices higher.

But keep in mind:

- We now have nearly a decade of real-world data showing that LNG exports have a minimal impact on domestic natural gas prices – in fact, Americans pay among the lowest residential prices in the world.
- U.S. natural gas prices hit an all-time low in November 2024 despite exports that are near all-time highs.
- DOE's own data projects a lower impact on domestic natural gas prices than in previous studies. While the new 2024 study indicates that Henry Hub prices could increase to $4.62 per million Btu in 2050, the 2018 DOE LNG study estimated they could increase as high as $6.70 per million Btu in 2040 – and this higher price impact did not warrant a "pause" in LNG exports.
- U.S. LNG exports have risen by about 13 BCF per day since 2016, but natural gas production has surged nearly three times that much – ensuring that Americans are not competing for molecules with exporters.
  - Indeed, the DOE study itself notes that "[t]he long timelines of constructing and operationalizing LNG facilities allows for U.S. natural gas producers to increase output to supply the new

liquefaction facilities and ultimately to ensure that the feed gas flows to the export terminals are highly predictable."

- S&P Global found that lifting the LNG permitting pause would have a negligible (<1%) impact on household natural gas prices.
- The biggest impediment to bringing low-cost gas to the market is obstructing needed natural gas infrastructure – like pipelines.
- **The bottom line**: For years, critics have been claiming that LNG exports would raise prices here at home, but time and again industry has proven that it can maintain a well-supplied domestic market while also providing our allies with needed energy.

DOE Claim #3: Rising U.S. LNG exports will drive global greenhouse gas (GHG) emissions higher.

But keep in mind:

- S&P Global found that if additional U.S. LNG is unavailable, 85% of the replacement energy would come from coal, oil, and gas from other countries – most of which is more GHG-intensive.
- The DOE study itself predicts only a negligible impact on global GHG emissions from increased U.S. LNG exports, with a <0.1% increase in emissions under the "higher exports" scenario.
- Global coal consumption has set all-time high records for the past three years, and the IEA projected that it will continue to grow for the next three years.
- Emerging economies will continue to burn coal as a cost barrier to entry exists for lower-emitting resources.
- Replacing that coal with cleaner burning natural gas will help mitigate emissions while deployment of emissions reductions technologies improves and become more affordable.
- Berkeley Research Group (BRG) analyzed the average GHG emissions intensity of U.S. LNG versus that of competing fuel sources in importing regions and found that:
  - The GHG emissions intensity of coal is twice that of U.S. LNG;
  - Russian pipeline gas delivered to Europe has a GHG emissions intensity more than one-third higher than U.S. LNG;
  - Pipeline gas supplied from Turkmenistan to Asia has a GHG emissions intensity four times higher than U.S. LNG.
- **The bottom line:** There is an opportunity for the U.S. to supply a cleaner alternative to coal and other higher-emitting fuels in regions where rapid growth and increased energy demand is forecasted.

DOE Claim #4: China could be the world's largest LNG importer through 2050, and the U.S. should consider guardrails that protect the public interest.

But keep in mind:

- Wood Mackenzie's findings were clear that Southeast and South Asia – not China – will drive the long-term demand for LNG in Asia.
- Today, our allies in Europe are the biggest beneficiaries of U.S. LNG exports – roughly two-thirds of our LNG goes there while less than 5% goes to China. The largest LNG suppliers to China in 2023 were Australia, Qatar, and Russia.
- China, India and Southeast Asia account for more than 75% of global coal consumption, which hit another record in 2023 and is poised to break it again this year. This means that displacing coal with U.S. LNG is an easy way to drive climate progress.
- **The bottom line:** Abundant exports of U.S. LNG support the energy security of our allies and positively impact the U.S. trade balance.

DOE Claim #5: Increasing U.S. LNG exports will displace renewables.

But keep in mind:

- In most places, U.S. LNG is not competing with renewables but rather with coal and other higher-emitting fuels from countries with lower environmental standards.
- S&P Global found that if additional U.S. LNG is unavailable, just 15% of the replacement energy would come from renewables – whereas the rest would come largely from higher-emitting fuels like coal, oil and gas from other countries.
- Similarly, ICF International found that without U.S. LNG in 2022, coal and oil would have accounted for nearly all the replacement fuels.
- Coal consumption is projected to reach an all-time level of 8.77 billion tonnes in 2024 and without affordable and abundant U.S. LNG, many regions will primarily turn to coal to fill their energy needs.
- **The bottom line:** U.S. LNG allows other countries to replicate our GHG reductions success story while supporting American jobs and growing the economy.

Fast facts on the benefits of U.S. LNG

The U.S. LNG industry drives significant economic growth

- In 2023, the U.S. LNG industry contributed $44 billion[1] in economic activity and supported over 222,000 jobs.[1]
- Similarly, it provided $23 billion in labor income and nearly $11 billion[1] in taxes and royalty payments.
- In 2023, U.S. LNG exports reduced the U.S. trade deficit by $34.2 billion,[2] or 4.2%.

Economic Metric	2023
Employment (jobs)	222,450
Labor Income ($billions)[b]	$23.2
GDP ($billions)	$43.8
Tax and Royalty Payments ($billions)[c]	$11.0

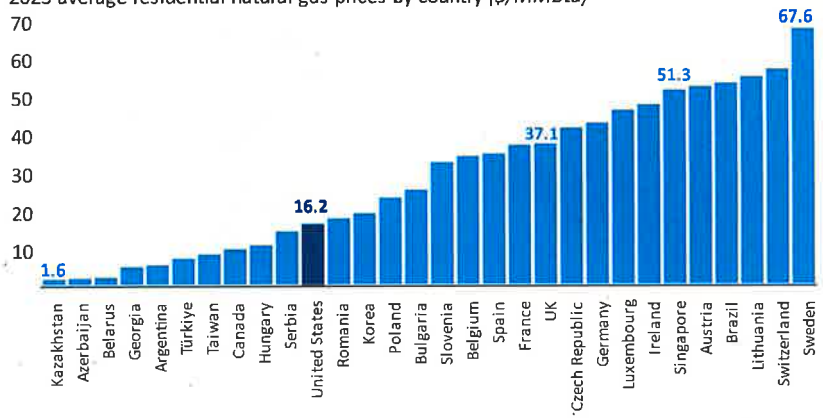
Source: PricewaterhouseCoopers

U.S. LNG exports do not negatively impact the U.S. energy market

- Despite record exports, Americans enjoy among the lowest residential natural gas prices in the world.[3]
- Since the birth of the U.S. LNG export industry, growth in natural gas production has outpaced LNG export growth nearly **three-fold**.[4]
- Since LNG exports began in 2016, Henry Hub natural gas prices have averaged 37% lower[5] than during the preceding decade.
- Artificially obstructing needed natural gas infrastructure, including pipelines, will impede access[6] to low-cost natural gas regardless of LNG export levels.

U.S. residential natural gas prices remain some of the lowest, particularly in the OECD, despite record high natural gas exports

2023 average residential natural gas prices by country *($/MMBtu)*



Source: International Energy Agency

[1]The Economic Benefits of U.S. LNG Exports | NAM [2]U.S. Energy Trade Dashboard | International Trade Administration [3]Impact Analysis of U.S. Natural Gas Exports on Domestic Natural Gas Pricing | Energy Ventures Analysis [4]Natural gas explained | EIA [5]Natural Gas Futures Contract 1 | EIA [6]Impact Analysis of U.S. Natural Gas Exports on Domestic Natural Gas Pricing | Energy Ventures Analysis

API American Petroleum Institute | AXPC American Exploration & Production Council | LNG Allies The US LNG Association | U.S. Chamber of Commerce Global Energy Institute | center for LNG

U.S. LNG can help reduce greenhouse gas emissions globally

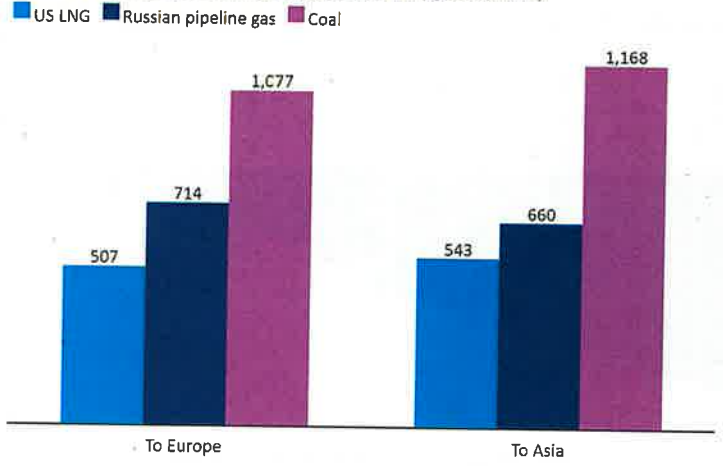
- Coal-to-gas switching is the key reason the U.S. has led the world in carbon dioxide reductions[7] since 2005, and the LNG industry allows us to export that success story.
- Global coal consumption reached a record high of 8.7 billion tons[8] last year, and in 2024, 3 out of every 4 tons[9] of coal burned globally will occur in India, China, and Southeast Asia.
- Because U.S. LNG has a far lower emissions profile[10] than the fuels it will likely displace[11], it drives global emissions reductions.
- Methane emissions from onshore U.S. oil and natural gas production have fallen over 40%[12] since 2015, while production has increased over 50%.

U.S. LNG is needed to meet growing global energy demand

- The EIA projects that global natural gas demand will grow by 29%[13] by 2050, as emerging economies industrialize, and coal-heavy regions seek to decarbonize.
- While our competitors are greenlighting LNG export projects to meet this growing demand, the DOE pause has left the U.S. stuck in neutral.
- The amount of LNG export capacity stuck in DOE's LNG pause[14] is equivalent to the annual natural gas consumption of Japan[15] and represents over $50 billion in direct investment.
- The Middle East was the leader[16] in greenlighting new projects in 2024.
- U.S. LNG is key to supporting the energy security of our allies – following Russia's invasion of Ukraine, the U.S. was able to replace over 85%[17] of the natural gas Europe lost.

U.S. LNG has lower GHG intensity than Russian natural gas or coal

GHG Intensity of delivered energy to Europe and Asia (*kg CO2e/MWh*)



Source: Berkeley Research Group

U.S. LNG Export Destinations – 2023

Source: U.S. EIA

[7]The changing landscape of global emissions | IEA [8]Coal Mid-Year Update – July 2024 | IEA [9]Coal Market Update – July 2023 | IEA [10]Comparative GHG Footprint Analysis for European and Asian Supplies of USLNG, Pipeline Gas, and Coal | BRG [11]Lifecycle GHG Emissions of US LNG Exports | ICF [12]Greenhouse Gas Reporting Program | EPA [13]International Energy Outlook 2023 – Table A6. World natural gas consumption by region, Reference case | EIA [14]Summary of LNG Export Applications of the Lower 48 States | U.S. Department of Energy [15]2024 World Statistical Review of Energy | Energy Institute [16]Global Gas Security Review 2024 | IEA [17]The Future of Natural Gas in a Low-Carbon World | EFI Foundation