



EXPORTING FUEL, IMPORTING INSECURITY

How the U.S. Fossil Fuel Industry Is Earning Windfall Profits from Oil and Gas Exports and Exploiting the Ukraine Crisis to Promote Fossil Fuel Infrastructure Expansion

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October 17, 2022

ACKNOWLEDGMENTS

Tyson Slocum, Rick Claypool, Adrian Shelley, David Arkush and Robert Weissman of Public Citizen provided input and editing of this report, as did Clark Williams-Derry of the Institute for Energy Economics and Financial Analysis and Lukas Ross of Friends of the Earth.

ABOUT PUBLIC CITIZEN

Public Citizen is a national non-profit organization with more than 500,000 members and supporters. We represent consumer interests through lobbying, litigation, administrative advocacy, research, and public education on a broad range of issues including consumer rights in the marketplace, product safety, financial regulation, worker safety, safe and affordable health care, campaign finance reform and government ethics, fair trade, climate change, and corporate and government accountability.



Key Findings

The U.S. fossil fuel industry has dramatically ramped up exports of oil and natural gas¹ in recent years, seeking to profit on the international market and keep prices high at home. The 2015 repeal of a 40-year-old ban on most crude oil exports and the construction of natural gas export terminals on the Gulf Coast has allowed the industry to maximize exports and rake in extraordinary profits while consumers and the climate pay the price.

The export boom poses grave danger for the planet. The drilling rigs, pipelines and export terminals used to facilitate the flow of oil and gas abroad will lock in massive amounts of carbon and methane pollution. Doing so forever damages our public lands and make it impossible to hold back global temperature increases from fossil fuel combustion to levels that are safe for humanity.

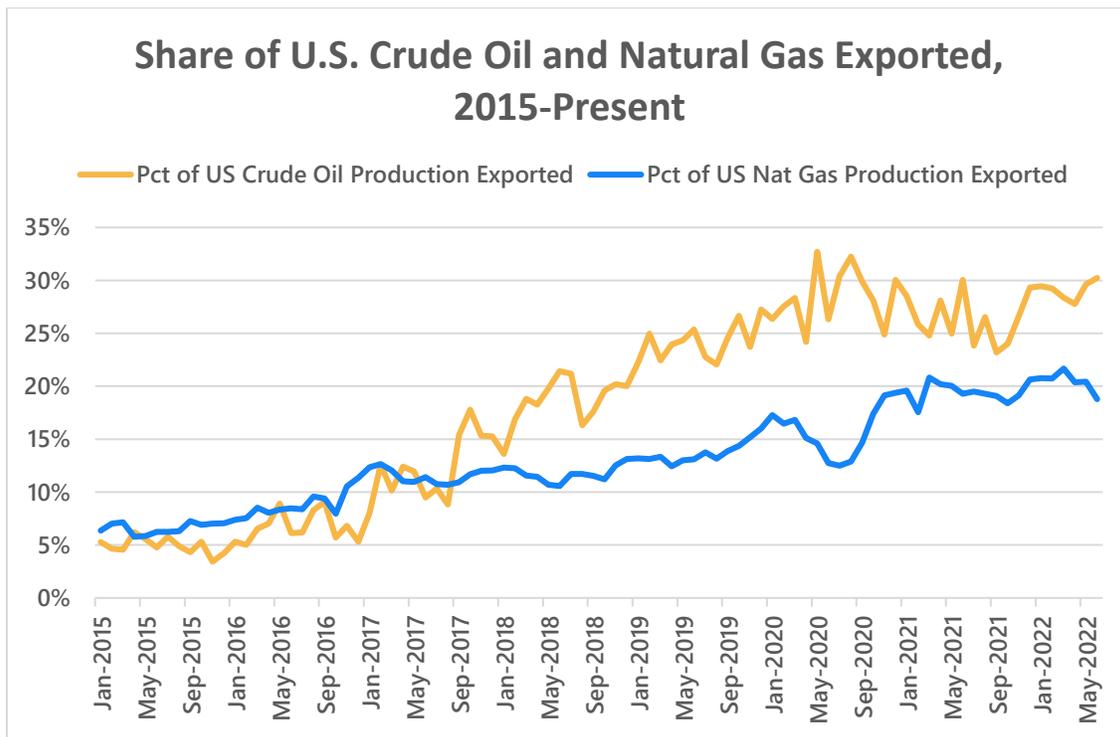
A Public Citizen analysis of U.S. Energy Information Administration data found that:

- For crude oil, about 29% of U.S. production in the first six months of 2022 was exported. That is more than double the 12% exported in 2017 and quadruple the 7% exported in 2016, the first full year of unrestricted crude oil exports. In the first six months of 2022, 3.4 million barrels per day of crude oil were exported from the U.S., nearly three times as much as in 2017, when about 1.2 million barrels per day were exported.
- For natural gas, more than 20% of U.S. production in the first six months of 2022 was exported. That was up from 11.5% in 2017 and 6.6% in 2015. An average of nearly 591 billion cubic feet of natural gas per month—including 336 billion cubic feet of liquefied natural gas—was exported from the U.S. in the first six months of 2022. Total natural gas exports in 2022 were more than double 2017 levels.
- In pushing to lift the crude oil export ban in 2015, the fossil fuel industry greatly oversold the purported consumer benefits. Unregulated exports have left U.S. consumers even more exposed to volatile global energy markets.
- Unprecedented exports of natural gas contribute directly to soaring U.S. natural gas prices tying the prices families in the U.S. pay for heating their homes to global calamities. Natural gas exports have radically upended domestic energy markets and are the primary factor in record price increases for both natural gas and electricity, fueling higher levels of energy poverty and unleashing energy insecurity for tens of millions of American households.

¹ Many in the climate movement justifiable prefer the term “fossil gas” because the term industry marketing term. natural gas” is [misleading](#) and downplays the fuel’s many negative impacts. This report uses “natural gas” for consistency with government reports and statistics but acknowledges that the term gives an unnecessary positive spin on a fuel that is destructive to the climate.

Introduction

Seismic changes in markets for U.S.-produced crude oil and natural gas have unfolded over the past decade and accelerated after Russia’s invasion of Ukraine and cutoff of natural gas to Europe. The Biden administration has emphasized the need for U.S. fossil fuel exports and ramped up production to ensure adequate energy supplies for Europeans over the coming winter. However, U.S. policymakers must ensure the fossil fuel industry does not succeed in its effort to exploit the current crisis and lock in climate-destroying carbon emissions for years to come. Allowing the fossil fuel industry to construct pipelines and export terminals that will be in place for decades will do enormous [damage to the climate](#) and public lands, and runs counter to the Biden administration’s own climate goals. Additional oil and gas exploration is incompatible with the international goal of limiting the most catastrophic climate harm. Consumers, meanwhile, are likely to see few if any benefits.



Source: Analysis of monthly data series, U.S. Energy Information Administration. Analysis compares U.S. exports of crude oil versus field production of crude oil (thousand barrels per day) and U.S. exports of natural gas versus U.S. dry natural gas production (million cubic feet).

A New Global Energy Crisis

The Russian invasion of Ukraine has upended global energy markets. In spring 2022, the U.S. and Europe pledged to stop buying Russian crude oil in the wake of Russia's invasion. Russia then retaliated by cutting off natural gas supplies to Europe, which has been highly dependent on Russian natural gas for home heating and for industrial consumption. The recent undersea [explosions](#) sabotaging pipelines carrying Russian gas show how tumultuous and unexpected disruptions to international energy markets require major changes in how Europeans receive fuel and underscore the global need to move away from fossil fuels in the long term.

Europe has long relied on access to cheap Russian gas to heat homes and boost the continent's industrial sector, which relies on natural gas to fuel energy-intensive heavy manufacturing. Germany's industrial sector, which makes everything from petrochemicals to automobiles, has been highly dependent on cheap Russian natural gas to run factories and as a feedstock for fertilizer and agricultural chemicals. Many experts had [warned for years](#) that Germany was vulnerable to severe disruption if Russia were to cut off the flow of natural gas, but German industrial gas consumers long pushed a [massive pipeline buildout](#) to access Russian gas to prop up its domestic industry.

Kicking our addiction to fossil fuels [would help cushion](#) the blow from international disruptions such as the Russian invasion of Ukraine. But since the Russian invasion of Ukraine, the fossil fuel industry and its allies on Capitol Hill have been [aggressively pushing](#) the Biden administration to do the opposite and built even more pipelines and export terminals. Industry-friendly lawmakers have been working hard to amplify that message, advancing former President Donald Trump's drill-everywhere agenda and dismissing the need for an urgent transition to renewables. Both the [American Petroleum Institute](#) and the [U.S. Chamber of Commerce](#) have prioritized the expansion of LNG exports as a centerpiece of their energy lobbying.

Despite evidence to the contrary, many natural gas export advocates cast the fuel as a benefit to the climate. Natural gas companies in October 2022 launched a new coalition, dubbed the [Partnership to Address Global Emissions](#). The coalition, which includes centrist think tanks and two unions, says it will "advocate for policies that enable the development of the infrastructure needed to increase production and export of U.S. liquefied natural gas (LNG) to replace foreign coal and lower greenhouse gas (GHG) emissions." However, research by the Natural Resources Defense Council casts doubt on these claims, [finding that](#) the process of transporting liquefied natural gas around the world is energy-intensive and prone to methane leaks, resulting in far more greenhouse gas emissions than natural gas consumed where it is produced. These factors "raise serious questions about the effectiveness of internationally traded gas as a strategy to reduce emissions and combat climate change," NRDC wrote.

The U.S. oil and gas industry and international energy traders have capitalized on the Russian invasion of Ukraine to earn [record profits](#). They are using the European energy

crisis to lock in a massive expansion of fossil fuel infrastructure and [sign lucrative 20-year natural gas supply contracts](#) to sell the fuel at high prices. These fossil fuel export projects won't be built for many years, far too late to help Europe with the present crisis. Instead, they will lock in massive amounts of carbon and methane pollution delaying urgently needed global action to ensure humanity can mitigate climate change and damage frontline communities on the Gulf Coast.

Driven by skyrocketing European demand for fuel, surging energy prices are already having unexpected consequences in [countries around the world](#). In England, new prime minister Liz Truss is [capping energy costs](#), in an effort to ensure average household heating and electricity are limited to £2,500 per year (about \$2,780) as well as expanding oil and gas drilling. In Italy, the government has put together [a \\$13.5 billion energy package](#) to aid consumers while also demanding [cuts in natural gas consumption](#), and boosting the use of coal. European manufacturers that make fertilizer, metal, paper and other energy-intensive products are [shutting down production](#) and laying off workers after Russia's cutoff of natural gas caused prices to soar.

In Asia, [Pakistan and Bangladesh](#) have been outbid by European countries willing to pay extremely high prices for energy, causing countries to switch to dirtier forms of fuel such as oil and coal. In Bangladesh, which is highly dependent on natural gas imports, skyrocketing prices [are causing power outages](#). India has been paying [record prices for liquefied natural gas imports](#) to make up for lost supplies from Russia. In Sri Lanka, the state-run power utility decided to raise electricity prices [by up to 264%](#) after the cost of fuel to produce power soared. U.S. production of natural gas, meanwhile, [has surged to record levels](#) to meet demand from Europe, which is now [the top recipient](#) of U.S. natural gas exports.

While gasoline prices have dropped substantially from their peak over the summer, natural gas costs are [likely to remain high](#) due to soaring European demand. High natural

Figure 10. Historical nominal front-month U.S. natural gas prices

dollars per million British thermal units



eia Data source: CME Group and Bloomberg L.P.

gas prices, driven partly by exports, also contributed to energy woes in Texas. The failure of natural gas-fired power plants in Texas was the [main reason](#) for the February 2021 power grid disaster in that state, a crisis that has now saddled taxpayers with [\\$38 billion in extra costs](#), largely due to sky high natural gas costs.

Even before the Russian attack, concerns about rising natural gas prices were building. In early February, 11 U.S. senators [urged](#) Energy Secretary Jennifer Granholm to limit natural gas exports, citing the potential for large heating bill increases especially for homes in New England and the Midwest, where the winter is coldest.

To date, the Biden administration, which hired [former LNG executive](#) Amos Hochstein as a key energy adviser, [has not been receptive to calls to restrict exports of LNG](#) or crude oil. The administration has urged oil refiners to [limit exports](#) of refined fuel amid low stockpiles. Pressure on the Biden administration to do more for U.S. consumers is likely to grow. New England is [particularly at risk](#) as it lacks a pipeline to connect to domestically produced natural gas and relies on LNG imports. The region's [governors](#) are [pressuring](#) Secretary Granholm to suspend regulations that would allow LNG shipments to New England for this coming winter.

The fossil fuel industry has hailed the boom in energy exports, claiming they will be a boon to American consumers and national security. "If we're going to keep the lights on in Europe, and we're going to keep the beer cold in Germany, it means that we're going to have to replace that energy somehow," Dan Brouillette, a former Trump administration Energy Secretary and now an executive with LNG terminal owner Sempra Energy, [told E&E News](#). "Right now, the easiest way to do that is with LNG, natural gas from the United States, from Qatar, from other places around the world. it's creating an opportunity for the U.S. industry."

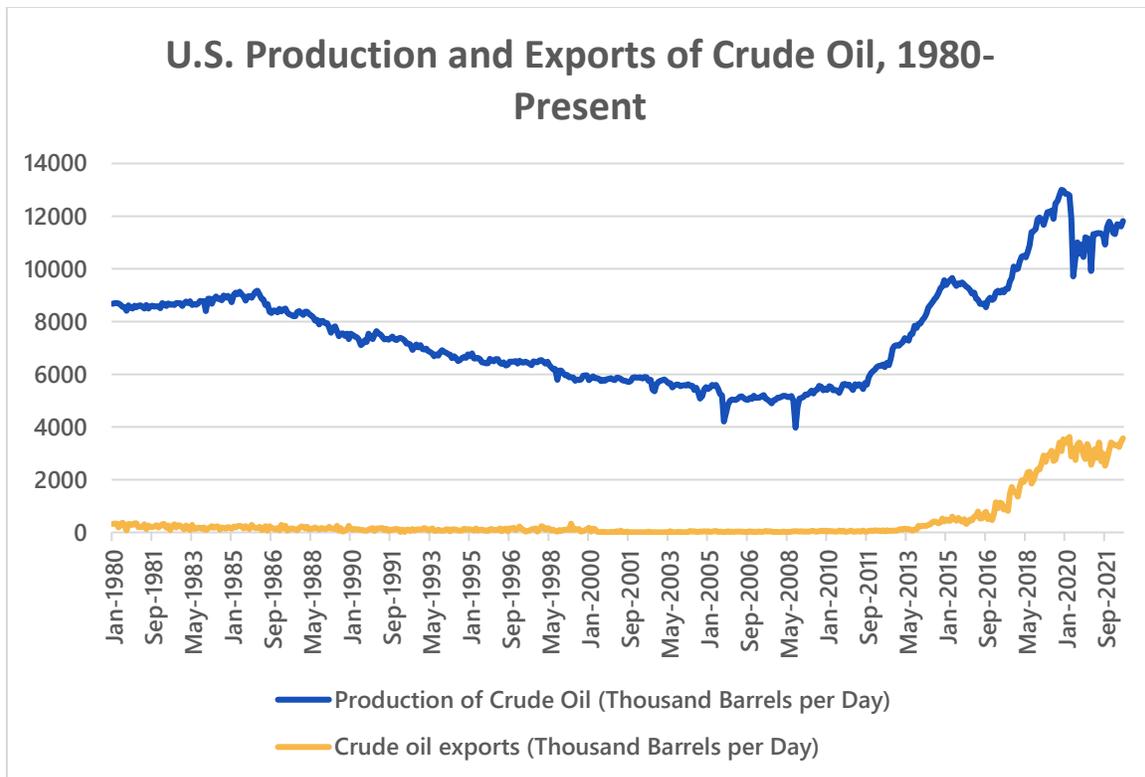
With huge amounts of crude oil and natural gas being shipped overseas, the U.S. oil and gas industry is now far more integrated into international markets. That has accomplished the industry's longstanding goal of establishing higher profits for U.S. producers and exporters. Meanwhile, exports of crude oil and natural gas are incentivizing ever-escalating domestic production, which exacerbates the climate crisis and does severe damage to public lands and waters. Rather than take the dramatic steps necessary to rapidly move the world off fossil fuels, including conservation, electrification and public transit, the fossil fuel industry wants to ensure it remains as profitable as possible for as long as possible.

Domestic Production Boom

Over the past decade, American fossil fuel production has increased dramatically, mostly due to the growth of onshore hydraulic fracturing, or fracking. The production boom resulted in an oversupplied domestic market and low prices. The advent of fracking in shale rock formations allowed the oil industry to revive production in many parts of the

U.S. where oil and gas had been in decline. Production soared in Texas, Appalachia, North Dakota and especially the [Permian Basin](#) of west Texas and New Mexico, an area where the first commercial oil well was [completed in 1921](#). The U.S. fracking boom contributed to a global glut of oil and gas, and consumers, especially in the U.S., paid low prices for several years. Cheap natural gas, especially in the U.S., caused electric power plant owners to increasingly turn to natural gas for electricity generation making coal-fired power plants unprofitable and causing them to shut down by the dozens.

Low oil and gas prices caused by overproduction made the U.S. fracking sector's business model financially unsustainable. Extracting oil and gas from rock formations is expensive, and fracked wells deplete quickly, so oil companies had to spend lavishly on drilling to boost production. The combination of high costs and low prices meant that fracking-focused companies [struggled](#) to generate cash from their capital-intensive operations. Between 2010 and 2020 U.S. oil and gas companies burned through hundreds of billions of dollars they had [raised from investors](#). After this decade of dismal financial performance, the coronavirus pandemic sent the fracking sector into a nosedive. The dramatic slowdown in economic activity caused oil prices to plunge, triggering a [tidal wave of oil company bankruptcies](#). However, the industry mounted a comeback as the global economy gradually emerged from the pandemic, oil and gas demand rebounded faster than supply. Oil companies themselves kept production in check, [avoiding a rush of overproduction](#) that could have lowered prices and profits, while the industry's lobbyists pressured the White House and Congress to roll back regulations and expand domestic oil drilling, blaming the Biden administration for high oil and gasoline prices, though they are largely out of government control.



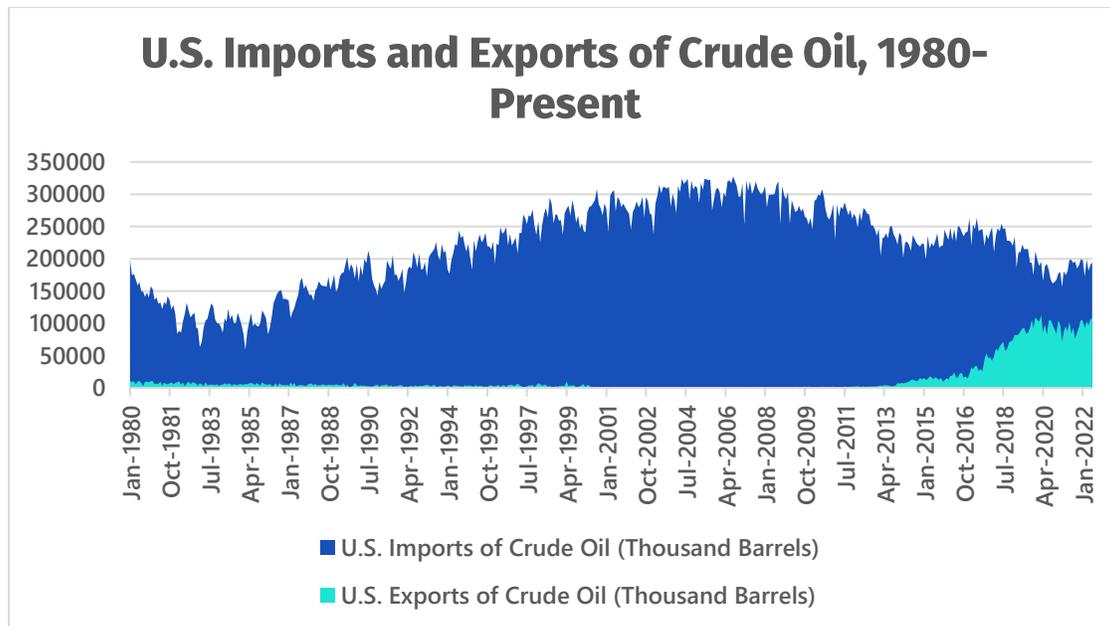
Source: Analysis of monthly data series, U.S. Energy Information Administration. Analysis compares U.S. exports of crude oil versus field production of crude oil (thousand barrels per day)

A Long Campaign to Export Crude Oil

In 2015, after a two-year lobbying blitz, the oil and gas industry convinced Congress to allow U.S. exports of crude oil, ending a 40-year-old ban dating back to the energy crisis of the mid-1970s. Congress barred the export of U.S.-produced crude oil and natural gas, under the Energy Policy and Conservation Act of 1975. The U.S. Commerce Department adopted regulations barring crude oil exports. While the law also barred the export of natural gas, there was no natural gas export industry to speak of, and the government never published rules to implement a natural gas export ban.

In the early 2010s, the U.S. oil and gas industry mounted an intense, multi-year campaign to remove crude oil export restrictions. Proponents of rescinding the oil export ban argued that oil market dynamics had changed significantly from 40 years ago, rendering the law antiquated and claimed that lifting restrictions would lower gasoline prices for households and small businesses while strengthening U.S. national security. Under the

export ban, the U.S. mostly banned crude oil exports with some limited exceptions² but allowed exports of finished petroleum products to countries around the world. Now the U.S. is a major crude exporter around the globe.



Source: Analysis of monthly data series, U.S. Energy Information Administration.

In pressing for an end to the crude export ban, industry executives and their allies repeatedly promised that consumers would see the benefit in the form of lower prices. ConocoPhillips CEO Ryan Lance, in a 2015 [speech](#), promised that consumers would benefit from the removal of the export ban, which barred U.S. producers from selling “light” crude oil on the world market to refiners in other countries. Lance said:

And consumers win. They’d get lower gasoline prices. I know that seems counter-intuitive – export oil to get lower gasoline prices. But when world oil prices come down, fuel prices come down. That’s true worldwide and in the U.S. The discounted light oil in the past has not led to lower gasoline prices because it has not had the opportunity to get into the global market and reduce the global price of oil. So by adding our exports to that global market, we’d help reduce fuel prices.

[Speaking](#) on CNBC in 2015, oil billionaire Harold Hamm, CEO of Continental Resources, was more forthright about what was driving oil industry’s export push: the fact that foreign buyers were paying the global benchmark for crude oil, known as Brent, which at

² Before Congress lifted the crude oil ban in 2015, there were several exceptions to export restrictions, including exports from Alaska’s Cook Inlet, exports to Canada for Canadian consumption as well as some exports from California. Before the export ban’s repeal in 2015, the vast majority of U.S. exports went to Canada, representing about % of U.S. production, according to the Government Accountability Office.

the time was considerably higher than the West Texas Intermediate benchmark price that prevails in the U.S.

“We’re out here trying to compete at a discounted price,” Hamm said. “We’re not on a level playing field at all. We need to be able to access those other refineries in the world and sell to our friends. I need to be able to deliver my oil to my partners in South Korea, but I can’t do it.”

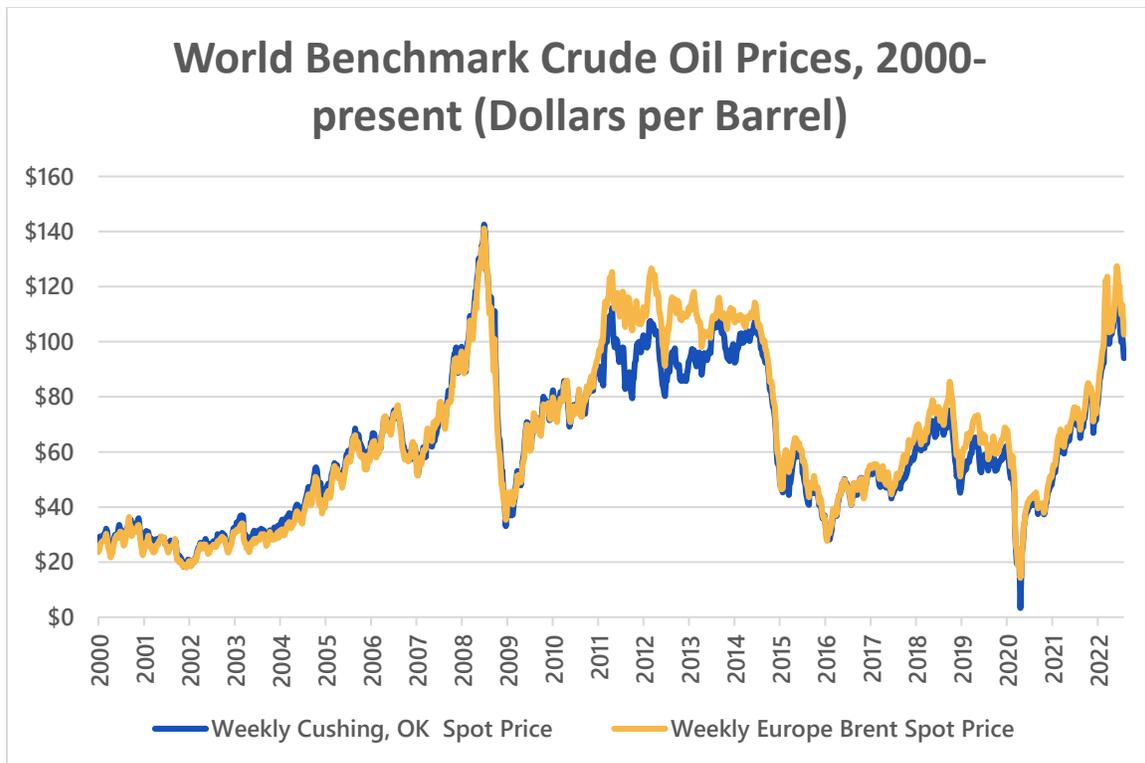
Television ads paid for by the American Petroleum Institute claimed that lifting the export ban would push down gasoline prices and diminish the influence of Russia and Iran over gasoline prices. According to an [analysis](#) by the Center for Responsive Politics, 300 lobbyists were lobbying Congress on oil export issues in fall 2015, up from 16 in 2013, with industry groups spending millions to promote lifting the export ban.



Source: American Petroleum Institute advertising campaign

Proponents of these arguments included many prominent center-left and Republican figures who often dismissed concerns about lifting export restrictions as quaint or old-fashioned. Typical of this reaction was Harvard professor and former Obama administration official Larry Summers, who [called](#) the question of lifting export restrictions “easy” and said that, “The merits are as clear as the merits with respect to any significant public policy issue that I have ever encountered.”

The national security establishment also urged the lifting of export restrictions. Former Defense Secretary Leon Panetta, a Democrat and a former Defense Secretary and CIA director, wrote a joint opinion piece with former National Security Advisor Stephen Hadley, a Republican, arguing that allowing exports would benefit U.S. security. “The moment has come for the U.S. to deploy its oil and gas in support of its security interests around the world,” they [wrote](#) in the Wall Street Journal.



Source: U.S. Energy Information Administration

Key lawmakers from oil states were crucial to pushing for the end to the export ban. Speaking on the Senate floor, Sen. Lisa Murkowski of Alaska said:

At a time when we have risen to be the world's top producer of oil, our outdated, 1970s-era ban on oil exports is causing us to miss out on a range of significant energy, economic, and security-related benefits. The United States is the only advanced nation that prohibits crude oil exports. It is distinctly weird for us to prohibit our own exports.

Sen. Heidi Heitkamp, at the time a Democratic senator representing North Dakota, made the case for lifting the export ban alongside oil industry executives in live appearances on CNBC, arguing that failure to allow exports would diminish investment in the U.S. oil sector and would lessen the availability of supplies on the international market and benefit U.S. security. "We have an energy hungry world, and they're getting their energy from sources that we'd like to say: no more, like Russia," she [said on CNBC](#) in 2014. Speaking on CNBC in 2015 [Heitkamp said](#):

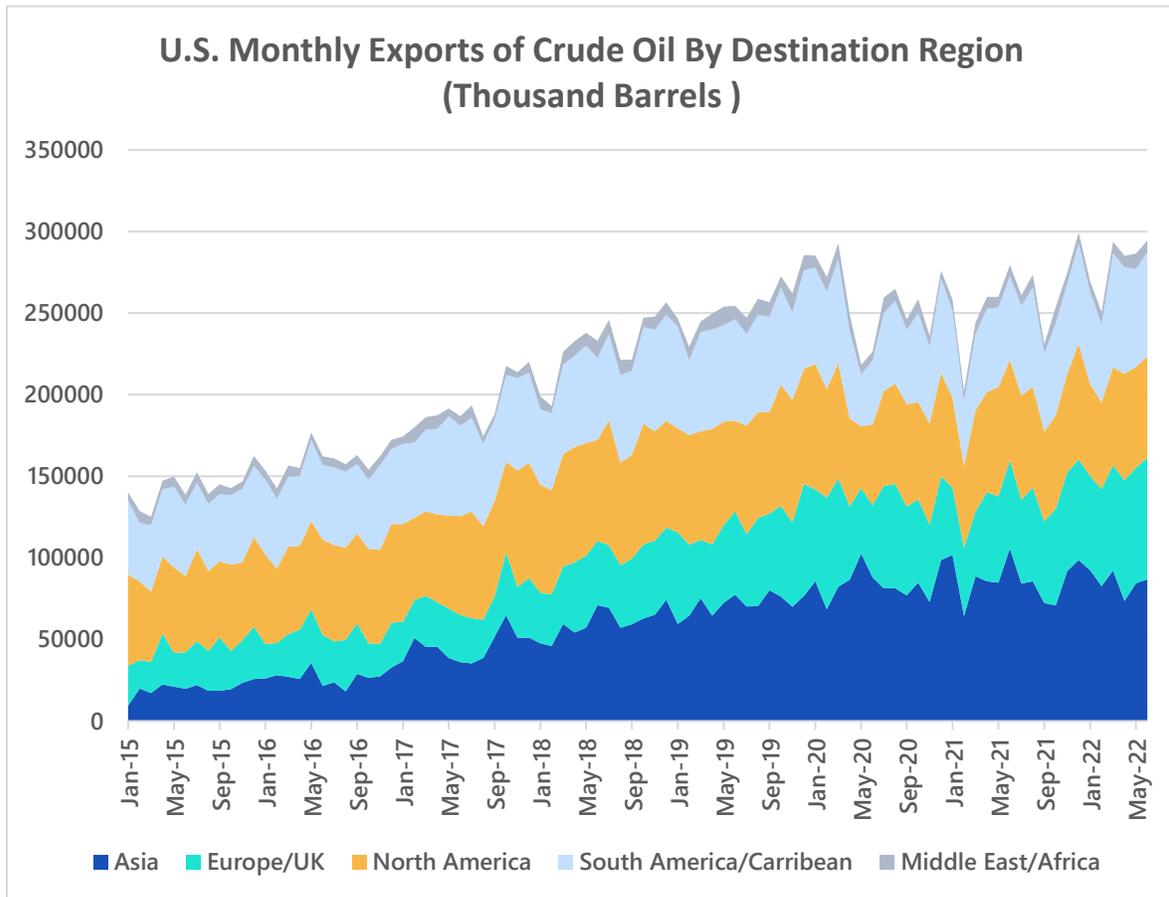
The more supply we can get into the marketplace, especially into Europe, the lower the international price is going to be...What we're trying to do is do what the economists tell us, which is do the right economic thing, let this commodity find its market. When it finds its market, we increase global supply and we will reduce prices in this country.

Several studies purporting to show consumer benefits from lifting the export ban helped make the case to lawmakers and the public. The Brookings Institution [advocated](#) forcefully for lifting the ban. In 2014, a 200-page [study](#) released for Brookings by NERA Consulting concluded that lifting the ban would boost domestic production: “With the crude oil export ban lifted all crude oil produced in the U.S. would compete freely in the global market and receive value commensurate with the global price of crude oil,” the study found, projecting that consumers would save between 9 and 12 cents per gallon in 2015, and between 0 and 8 cents per gallon by 2035. While the study conceded that “increased crude oil production and increased demand for refined petroleum products due to their lower price may lead to an increase in greenhouse gas emissions along with the economic benefits of removing the ban on exports,” it contained no analysis of the economic damage wrought by climate change. Several other studies came to similar conclusions. ICF International was hired by the American Petroleum Institute to produce a [report](#) on the impacts of lifting the oil export ban, finding that the global crude price would drop with the resulting flood of U.S. exports.

The fossil fuel sector’s lobbying effort ultimately succeeded when the crude export ban was eliminated in [a spending and tax package](#), passed by Congress in late 2015. As part of the deal, Democrats achieved an important goal of extending renewable energy tax breaks in exchange for agreeing to lift the ban on oil exports. However, an analysis conducted at the time by Oil Change International concluded [that this was a poor trade](#), as it would link a temporary tax credit extensions to incentivize renewable energy with a permanent policy change that would lead to a boom in carbon emissions.

In retrospect, the promised benefits of the end to the U.S. export ban either failed to materialize or were much less impressive than touted by industry. International factors, such as Saudi production levels proved to be a much bigger influence on prices. A report by the [Government Accountability Office found that](#) U.S. refiners, which buy crude oil and refine it into products sold to consumers, generally paid higher prices. “Profit margins for many domestic refiners likely decreased as the prices refiners paid for domestic crude oil increased,” the GAO wrote.

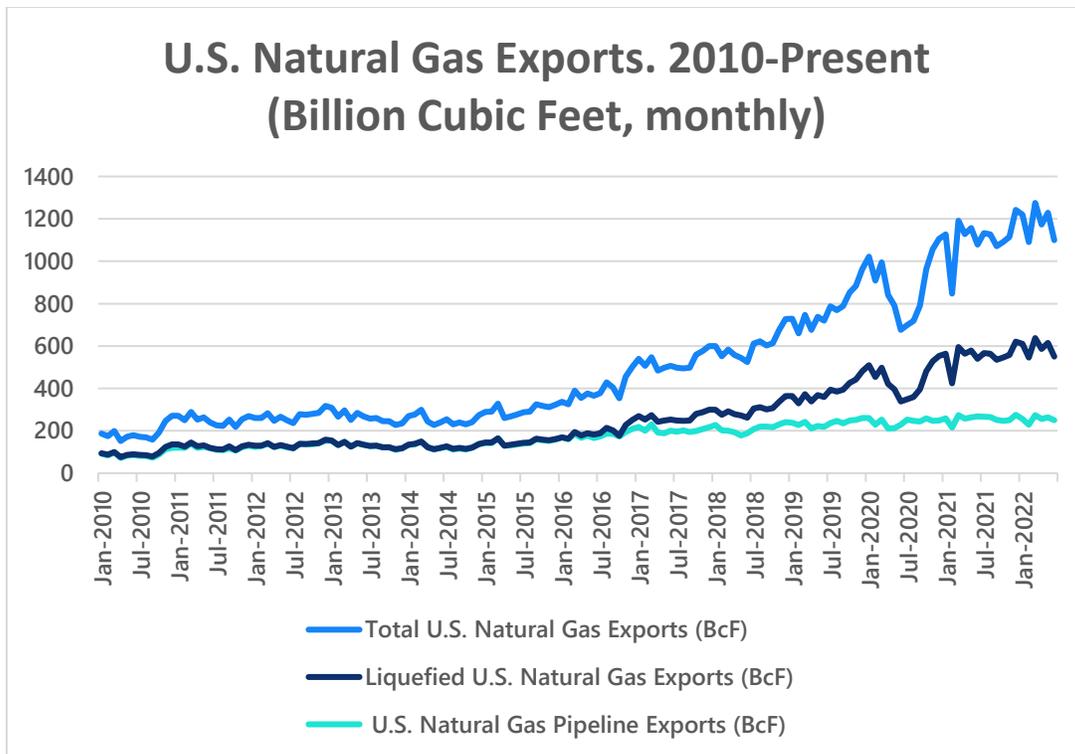
More recently, the oil industry has pressured the White House and Congress to roll back regulations and expand domestic oil drilling, amid [dire warnings](#) that oil would soar to \$200 per barrel and economic chaos would ensue. Even before the Russian attack on Ukraine, the American Petroleum Institute published a series of misleading and opportunistic social media [posts](#) about boosting oil production in the United States. Using red, white and blue imagery, API claimed it seeks to “unleash American energy” and “protect our energy security.” The trade group said the Biden administration must “release permits” on federal lands and ramp up offshore drilling, sending a [letter](#) to Energy Secretary Jennifer Granholm urging the Biden administration to ramp up offshore and onshore drilling and exports of domestic fuel.



Source: Analysis of U.S. Energy Information Administration data series “Total Crude Oil and Products Exports by Destination” (monthly)

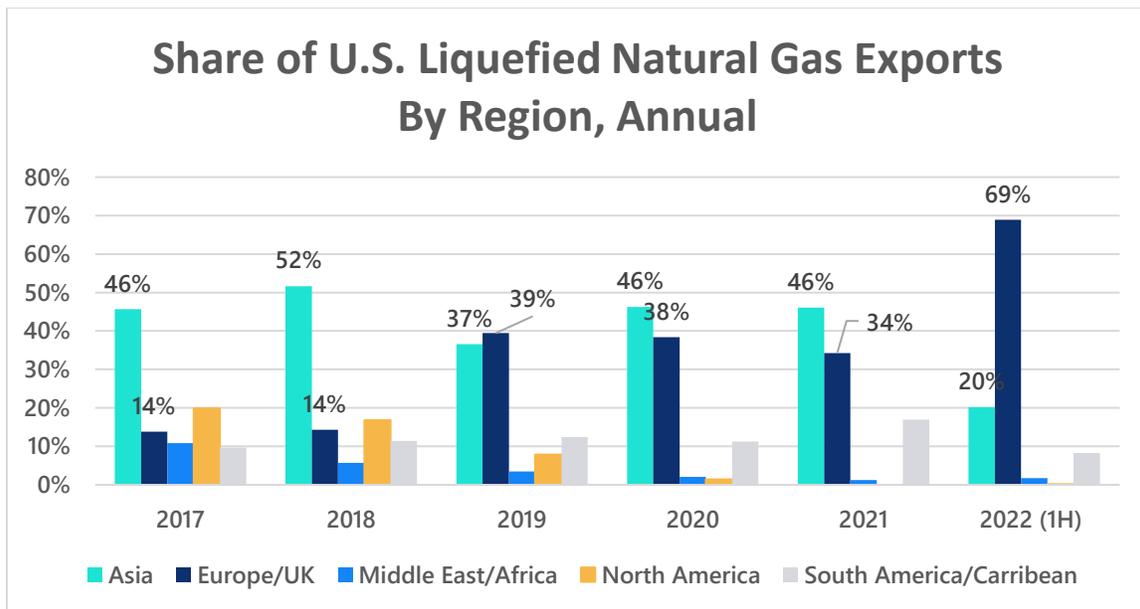
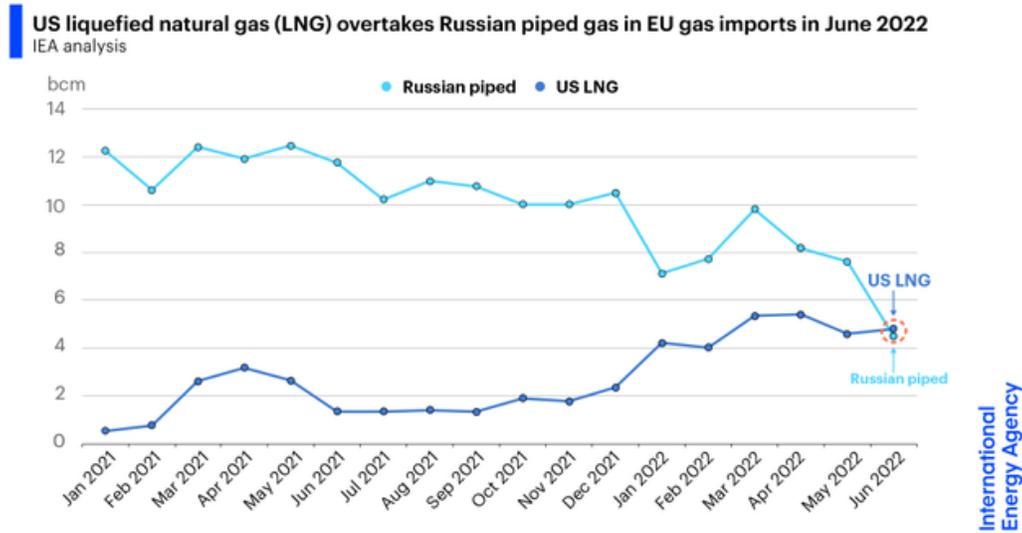
Natural Gas Exports Surge

The U.S. exported nearly zero liquefied natural gas before 2016. Now, the U.S. has become the world’s [largest natural gas exporter](#), followed by Qatar and Australia, due to the construction of seven new liquefied natural gas export terminals, five of which are on the Gulf Coast of Louisiana and Texas. In 2015, only about 6.6% of U.S. natural gas production was exported, according to federal data. By early 2022, more than 20% of production was exported.



Source: Analysis of monthly data series, U.S. Energy Information Administration.

In most years, Asian countries have been the largest recipients of exported natural gas from the U.S., making up 40% to 50% of U.S. exports in most years. However, exports to Europe soared in 2022, making up nearly 70% of U.S. LNG exports in the first half of 2022, according to Public Citizen’s analysis of U.S. Energy Information Administration data. U.S. fossil fuel companies are now earning [massive profits](#) by exporting gas to European countries, where natural gas prices have [risen more than tenfold](#) over the past year as Europe’s LNG imports from the U.S. exceeded natural gas piped in from Russia for the first time, [according to the International Energy Agency](#).



Source: Analysis of U.S. Energy Information Administration data series “U.S. Natural Gas Exports by Country” (monthly)

The industry has capitalized on the Russian invasion of Ukraine and exploited public sympathy to ramp up long-term plans to [expand fossil fuel export infrastructure](#) in the U.S. as well as in [Canada](#) and [Mexico](#). . An “infinite” number of investors are lining up to fund LNG exports, a Cheniere Energy executive vice president said earlier this year, [according to the Washington Post](#). “There are some institutions that have exited the hydrocarbon business, but for every one of those, there are 50 that will ensure that high-quality projects like ours are very attractive with finance,” he said.

The internationalization of the natural gas market is a relatively new phenomenon. In early 2016, the [first major export shipment](#) of liquefied natural gas from the U.S. departed

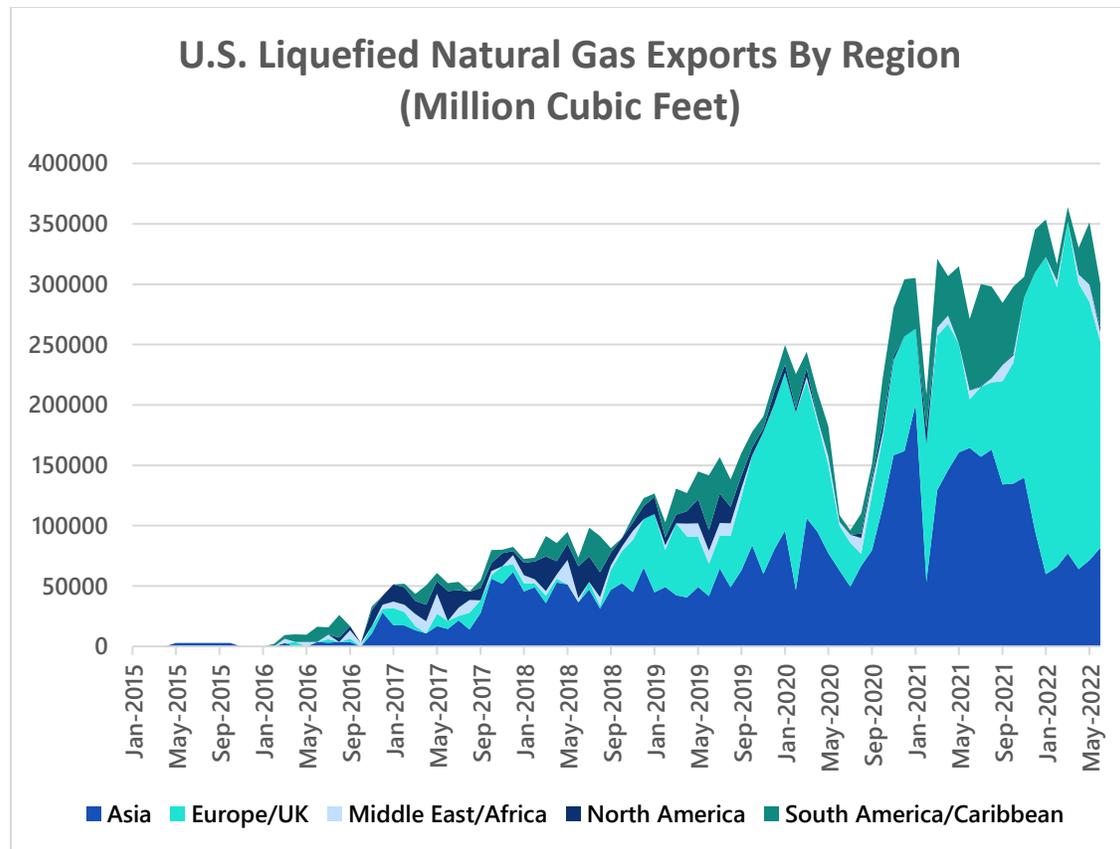
from Cheniere Energy's Sabine Pass export terminal in Louisiana, sending a cargo of [3 billion cubic feet of natural gas](#) on a giant tanker to Brazil. The shipment marked a turning point in the U.S. energy industry. The advent of shale gas production allowed energy companies to launch a massive effort to build new export terminals and convert old import terminals to export terminals. Liquefying gas involves an expensive and energy-intensive process. Methane, or natural gas, normally exists in a gaseous state and evaporates quickly. It needs to be frozen to negative 260 degrees Fahrenheit to be condensed and shipped around the world through a process known as liquefaction, then transformed back into a gas for consumption.

Cheniere, founded by [former restaurant owner and banker](#) Charif Souki, initially bet - disastrously -- that the U.S. would be importing large quantities of natural gas from around the world and started building an import terminal to bring LNG into the U.S. But as the fracking revolution and shale boom unfolded, the company reversed course and spent \$20 billion constructing an export terminal on the Texas-Louisiana border. Souki was ousted from the company in 2016 in a [dispute with investor Carl Icahn](#). He went on to found a new LNG export company, Tellurian Inc. That company has been facing [scrutiny](#) over alleged nepotism and other management problems. Tellurian has been unable to [obtain financing](#) and lost [two major customers](#) for its proposed and now [troubled](#) Driftwood LNG plant in Louisiana. All the while, Tellurian has been working to build its brand and name recognition in Washington, D.C., with an advertising [campaign](#) touting LNG as a cleaner energy source. Tellurian's slick "energy of now" campaign promotes natural gas as a "bridge fuel" that would ultimately pave the way for renewables. The company argues that: "The global energy crisis is real. We need a solution right away. In order to actually get to a renewable future, we need an energy solution for this very moment. Not the energy of what could be or what will be, but the energy of now."



Source: Author's photo of Tellurian advertisement on D.C. apartment building

While Tellurian has struggled, Cheniere and other U.S. energy exporters are now racking up huge profits. Cheniere in September 2022 [boosted its earnings forecast](#), hiked its annual dividend by 20% and added \$4 billion to its stock buyback program – a move that benefits investors by reducing the number of outstanding shares. And even if the higher interest rate environment makes borrowing billions of dollars more expensive and thus more difficult to finance large LNG terminals, the industry has other ways to expand. Due to a FERC decision to [exempt certain small-scale](#) LNG export terminals from its jurisdiction, future LNG export expansion may feature dozens of less capital-intensive projects



Source: Analysis of U.S. Energy Information Administration data series “U.S. Natural Gas Exports by Country” (monthly)

Exports Drive Soaring Natural Gas and Electricity Prices

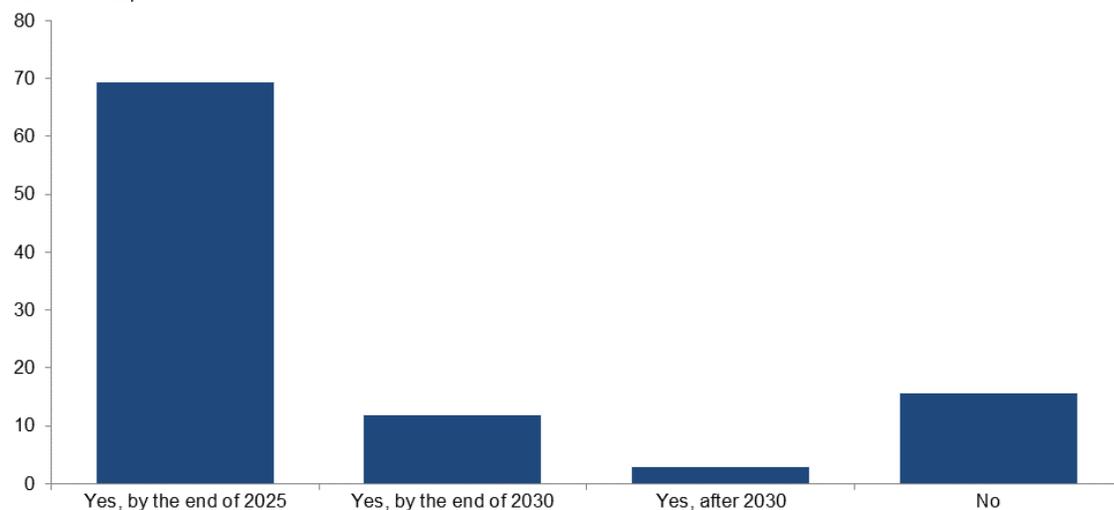
Exports of liquefied natural gas are already boosting [utility bills for homes and businesses](#), fueling inflation and instability in the U.S. As one executive at Michigan-based utility CMS Energy, which buys natural gas for retail customers, told the Wall Street Journal one year ago: “Suddenly, we have a global market that used to be much more regionalized ... It’s a much more complex equation to solve than it was a few years back.” The impact of natural gas exports is likely to lead to higher prices for years to come. A Goldman Sachs analyst wrote in a research note cited by the Wall Street Journal in March that “U.S. gas demand will be primarily driven by U.S. LNG export capacity additions going forward,” projecting that U.S. prices would likely be tethered to more expensive international markets by 2025.

The Federal Energy Regulatory Commission, in predicting higher natural gas prices for summer 2022, cited increases in demand from the industrial, residential, power generation and export sectors. Higher export demand “is primarily due to the increase in liquefied natural gas (LNG) liquefaction capacity which may lead to additional LNG exports serving international markets this summer,” FERC staff [wrote](#).

Rising energy costs—driven by higher natural gas prices stemming in part from record LNG exports—are a major factor impacting inflation for consumers. The U.S. Energy Information Administration [estimates](#) that U.S. household heating costs for the upcoming winter will be about 28% higher than a year earlier for households using natural gas and nearly. The EIA also projects that the nationwide residential price of electricity will average 14.8 cents per kilowatt-hour in 2022, up 7.5% from 2021. Increased retail electricity prices “largely reflect an increase in wholesale power prices driven by rising natural gas prices,” the EIA [wrote](#). In the coming years, the trend of high natural gas prices is likely to continue. Nearly 70 percent of oil and gas executives surveyed in September 2022 believe that the increase in exports to Europe will end “the age of inexpensive U.S. natural gas,” according to a September 2022 [survey](#) by the Federal Reserve Bank of Dallas.

Do you expect the age of inexpensive U.S. natural gas to come to an end as liquefied natural gas exports to Europe expand?

Percent of respondents



NOTE: Executives from 134 oil and gas firms answered this question during the survey collection period, Sept. 14–22, 2022.

SOURCE: Federal Reserve Bank of Dallas.

These high prices are creating significant economic hardship for tens of millions of American families. Utility bill burdens are regressive, meaning lower-income families pay larger proportions of their income on such necessities compared to their more affluent neighbors. With natural gas representing the largest share of fuel (37%) for electric power generation in the U.S., combined with many families’ reliance on natural gas for home heating, the export-driven energy spikes are resulting in profound energy insecurity for millions of Americans. FERC Chairman Richard Glick has expressed concern about the impact of natural gas exports on U.S. electricity consumers because so much natural gas is burned to produce electricity. “I think we know LNG demand is not going to go down. It’s going to continue to go up,” [Glick said in May 2022](#). “Obviously, that has a big impact on electricity prices.”

The connection between LNG exports and the price paid by consumers became clear in summer 2022 when the Freeport LNG natural gas export terminal south of Houston on

the Gulf Coast of Texas, sustained a massive explosion. The shutdown of the [\\$14 billion terminal](#), the second-largest in the U.S., caused natural gas prices to [plunge by 12%](#) the day after the explosion. The plant's outage removed a major consumer of natural gas, and prices [fell again](#) after the company said production would not fully resume until later in 2022. Prices continued to bounce [up](#) and [down](#) based on changes in the plant's expected restart date, illustrating how one LNG export plant's troubles can significantly impact prices for the entire U.S. natural gas market.

After the Freeport plant's outage, the U.S. Energy Information Agency revised downward its LNG export forecast for the second half of 2022 and lowered its price forecast. "With less LNG being exported in the second half of the year, more natural gas is likely to stay in the domestic market," [said EIA Administrator Joe DeCarolis](#). "We expect lower U.S. natural gas prices for the rest of 2022 than we had previously forecast, but lower prices in 2022 led us to reduce our expectations for natural gas production."

Meanwhile, natural gas producers, export terminal owners, energy traders and financial firms are making billions from U.S. natural gas exports. Commodity traders, banks, hedge funds and energy companies that have large trading desks have been poised to make sizeable profits. Key players include BP, J.P. Morgan Chase, Trafigura, Guvnor, Shell, Vitol, Goldman Sachs, Morgan Stanley, Glencore, as well as hedge funds including Citadel Securities. Trading houses can [make huge profits](#) from selling U.S. natural gas to Europe if they locked in natural gas at lower prices. "It's an incredible arbitrage at the moment," one [analyst told Business Insider](#), adding that traders could be raking in a profit of \$150 million on a single shipment of natural gas. Another energy investment banker said that European countries are so desperate to buy up natural gas, that cargoes can be filled up in the U.S. for about \$60 million and sold in Europe for \$275 million. "You're not talking about a margin. You're talking about a multiplier," energy investment banker Laurent Segalen told Business Insider.

Gulf Coast Communities Suffer

Residents of Gulf Coast communities near refineries, chemical plants and LNG export terminals have long suffered due to the high concentration of petrochemical facilities on the Texas-Louisiana border. Largely African American communities in Port Arthur, Texas have received little economic benefit from the refineries and export terminals and experienced serious health problems for many years. In a 2017 report, the Environmental Integrity Project wrote movingly about Port Arthur in a deeply researched [report](#):

Local residents, although tenacious and determined, feel left behind – and sometimes sickened – by the empty promises of economic development as the refineries that surround them release streams of pollution over their playgrounds, churches and homes. The industries here are increasingly mechanized and computerized – requiring fewer and fewer workers – as they expand their capacity."

The report added that:

Generations of west side residents have become accustomed to breathing air laced with sulfur dioxide, hydrogen sulfide, and benzene, either acrid or sweet, depending on the day, shrugging off the respiratory ailments, heart troubles, and significantly elevated cancer (and even higher cancer mortality rates) as part of daily life”

Residents of the Gulf Coast area have been raising serious [concerns](#) about safety and environmental impacts of LNG export projects, including pollution and climate change-induced natural disasters. “We are tired of being sacrificed,” John Beard, founder of the [Port Arthur Community Action Network](#) told the [Washington Post](#). “I fear if these industries are allowed to re-entrench themselves with these projects, we will be stuck with this until at least the mid-21st century. At that point, it is game over. No more polar caps. No more snow-capped mountains. ... Then what do we do?”

In summer 2022, Cheniere Energy tried [to get a waiver](#) from pollution control requirements aiming to exempt two Gulf Coast facilities from regulations limiting emissions of formaldehyde, which causes cancer. The company argued that complying with environmental regulations would harm the ability of the U.S. to meet European energy needs. The U.S. Environmental Protection Agency [denied the request](#). Life in the shadow of the fossil fuel industry can often feel precarious. One lifeguard in Texas told the Houston Chronicle he was working near the Freeport LNG terminal in the summer of 2022 when a massive explosion occurred, throwing him out of his seat and to the ground. “Fumes unleashed by the explosion smelled so foul that the lifeguards who had bandanas covered their noses and mouths with them as they evacuated people from the beaches,” the Chronicle [wrote](#).

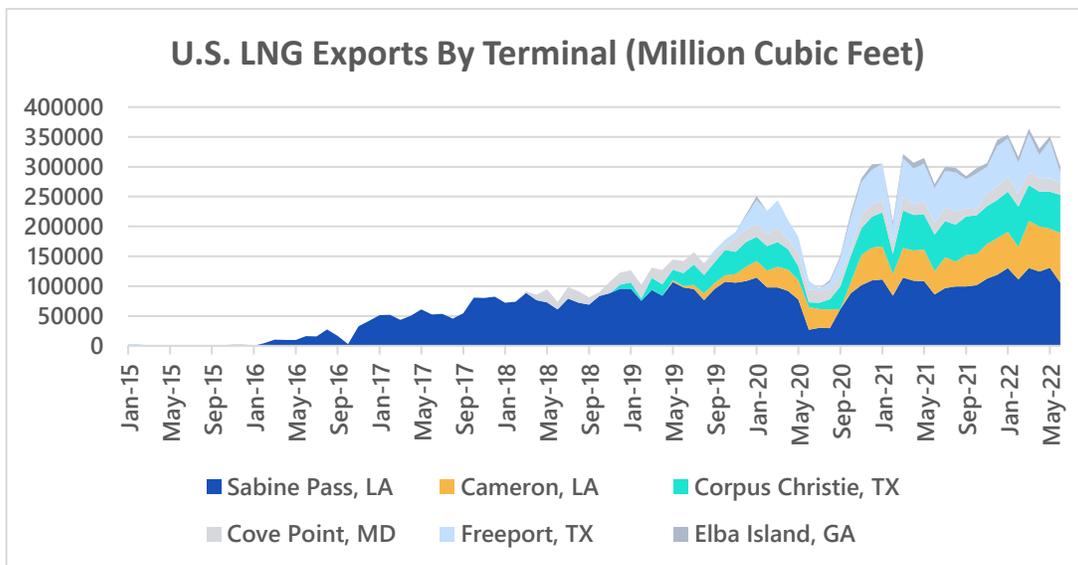
Climate Impacts of Natural Gas Exports

The fossil fuel industry often [deceptively asserts](#) that natural gas is a so-called “bridge fuel” – cleaner than coal and oil and a viable way to reduce greenhouse gas pollution. This [myth](#) relies on the erroneous idea that only gas can provide an affordable replacement to coal. While burning gas produces less carbon dioxide than coal, extracting processing and transporting gas – especially overseas – has a large carbon footprint and often results in intentional and unintentional methane releases. Methane, the main component of natural gas, has a far larger short-term climate impact than carbon dioxide in the short-term. After 20 years, the climate impact of methane is more than 80 times stronger than carbon dioxide. Even after 100 years it is still 28 times greater than CO₂.

Natural gas drilling, pipelines and export terminals are a significant source of methane emissions, and that is especially true for LNG terminals. An analysis released by the Natural Resources Defense Council [found](#) that greenhouse gas emissions derived from the energy-intensive process used to turn gas into liquefied form, ship it overseas and then turn it back into gaseous form are about equal to the emissions produced from the

actual burning of the gas. That means that the climate impacts of gas shipped overseas are twice as large as gas consumed closer to where it is extracted. The energy-intensive process of turning gas into a liquid, transporting it across the ocean and then turning it back into a gas, combined with leaks and intentional releases of methane, means that the greenhouse gas footprint of U.S.-produced LNG is “at best, only modestly smaller than that of other fossil fuels,” NRDC found.

The U.S. natural gas industry has been under pressure to begin addressing its significant greenhouse gas emissions, due to pressure from Europe. In 2020, French energy utility Engie (which is 23% owned by the French government) [canceled](#) a \$7 billion LNG deal with a U.S. exporter because of the absence of U.S. methane emission regulations. This action was initiated by the French government to support emerging European Union standards requiring lower-greenhouse gas emission profiles for natural gas imports. Still, Europe’s energy woes that have developed in 2022 threaten to derail any progress. The French nonprofit Reclaim Finance [found](#) that the 16 new LNG terminals planned for Europe would lead to 4.34 gigatons of carbon dioxide by 2029, destroying efforts to limit global temperature increases.



Source: Analysis of U.S. Energy Information data series “U.S Natural Gas Exports and Re-Exports by Point of Exit” (monthly)

Natural Gas Export Expansion Keeps Growing

Six major U.S. LNG export terminals have been constructed in recent years. A seventh terminal, [Calcasieu Pass LNG](#), opened in August 2022, with three more scheduled to open by 2025. These multi-billion-dollar projects take years to complete. Three projects are now under construction. They are: the [Golden Pass LNG project](#) in Texas, a \$10 billion joint venture between [ExxonMobil and the Qatar state-owned energy company](#); the [\\$13.2](#)

[billion Plaquemines LNG project](#) in Louisiana; and an [expansion](#) of Cheniere Energy’s Corpus Christie, Texas export facility.

U.S. liquefied natural gas projects (as of August 2022)

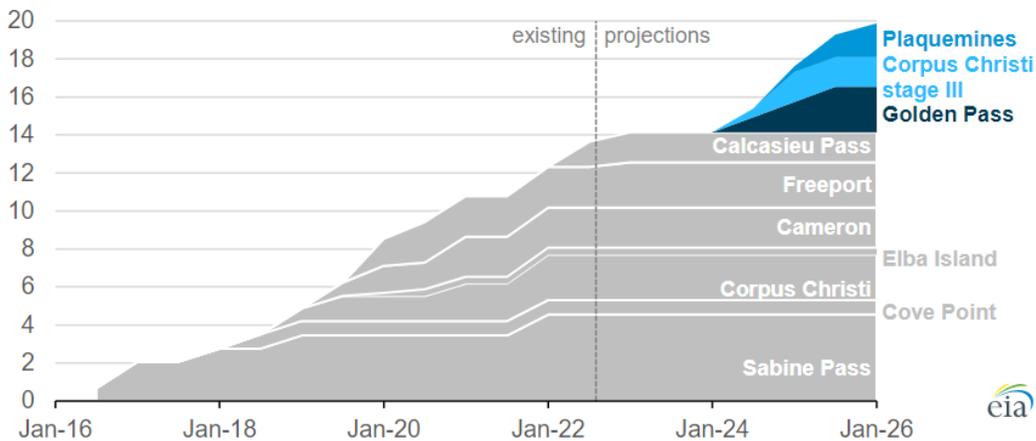


Data source: U.S. Energy Information Administration, *Liquefaction Capacity File*

The three export projects under construction will expand the U.S.’s LNG export capacity by a combined 5.7 billion cubic feet per day by 2025, according to the U.S. Energy Information Administration. Plans for at least 12 more LNG export plants and expansion projects are in the works, though it is unclear which projects are likely to advance.

U.S. liquefied natural gas export projects: existing and under construction (2016–2025)

billion cubic feet per day



Data source: U.S. Energy Information Administration, *Liquefaction Capacity File*

Note: EIA estimates are based on information from Federal Energy Regulatory Commission and U.S. Department of Energy filings, company websites, trade press, and other industry sources.

Despite industry plans to further [expand LNG export infrastructure](#) in the U.S., there are serious questions about whether those terminals are actually needed to supply the European market. An [analysis](#) by the Institute for Energy Economics and Financial Analysis found that the U.S. has enough capacity to boost LNG exports to Europe through

2030 without building new infrastructure apart from that already under construction. Meanwhile, European governments are working to [scale back energy consumption](#), especially from energy-intensive industries, to ensure that households retain heat and power over the winter. European governments' commitment to achieving climate goals would mean a reduction in gas demand by more than 40% by 2030. "While balances will remain tight for a couple of years, current policies and necessary demand reductions imply that the EU would build substantial natural gas overcapacity by 2030," concluded a study by [Bruegel](#), a think tank based in Brussels.

U.S. Public Lands Threatened

The fossil fuel export boom has benefited domestic producers, including major producers that exploit public lands, and other producers are looking to expand exports. In February 2022, Cheniere [tripled](#) the size of its agreement with Houston-based EOG Resources Inc., agreeing to supply the expansion of Cheniere's LNG export facility in Corpus Christie, Texas. Devon Energy, another major public lands producer, [signed an export deal](#) with an offshore LNG terminal to be constructed in the Gulf of Mexico. ConocoPhillips, another major public lands oil driller, in July 2022 [acquired](#) a 30 percent stake in a proposed LNG terminal project in Port Arthur, Texas. However, getting natural gas produced onshore to export terminals in coastal areas remains difficult, and oil and gas companies are pursuing numerous options.

Executives at onshore driller Coterra Energy told investors in May 2022 that they are looking for more export deals but is hampered by a lack of pipelines and export terminals. "The challenge is just economics," said a Coterra executive on a [conference call](#) with investors. "It's expensive to get to the coast. There's limited pipes to get there. So you pay a pretty good fee just to get there. And once you get there, we're entering a really crowded LNG market."

Another option [attracting interest](#) in the oil and gas industry is to ship LNG exports through Mexico. Eight LNG export [projects](#) have been proposed in Mexico, designed mainly for natural gas originating in the U.S. to export along the Pacific Ocean. The pipelines exporting gas from the U.S. to Mexico were built under former Mexican president Enrique Pena-Nieto, who pushed for private investment in Mexico's state-owned energy industry.

Energy companies have [turned to Mexico](#) as a favorable place to build LNG terminals after a proposed LNG export terminal on the southern Oregon coast [failed to obtain the necessary permits](#). The first new terminal under construction in Mexico, the Energia Costa Azul project is currently being built by Sempra Energy, on the Baja California peninsula about 70 miles south of San Diego. It also has proposed a second project, [Vista Pacifico LNG](#) in the state of Sinaloa. According to Bloomberg News, eight liquified natural gas export projects have been proposed in Mexico with more than 50 million tons of export

capacity, making Mexico the fourth-largest LNG exporter in the world, behind Qatar, Australia and the U.S.

These export terminals in Mexico could allow oil and gas producers in Colorado, Utah and New Mexico to find new markets for oil and gas, driving up interest in drilling on the state’s public lands, which are auctioned off for oil drilling by the federal Bureau of Land Management. Doing so would undermine the goal of ensuring a habitable planet for the coming generations. The International Energy Agency, in a landmark [report](#) in 2021, concluded that additional oil and gas exploration is incompatible with the international goal of limiting the most catastrophic climate harm. The IEA analysis found that to hold global warming to 1.5 degrees Celsius over pre-industrial levels, new oil and gas exploration must halt. Similarly, U.N. Secretary-General Antonio Guterres said in 2021 that countries [should](#) “end all new fossil fuel exploration and production, and shift fossil fuel subsidies into renewable energy.”

LNG Export Projects in Mexico

One project is under construction and more are on the drawing board

Project	Location	Status	Production Capacity (mtpa)	Daily Nat Gas Use (bcf/d)
Energia Costa Azul (Phase I)	Baja California	Under Construction	3.3	0.4
Energia Costa Azul (Phase II)	Baja California	Proposed	12.4	2.0
Mexico Pacific Limited	Sonora	Proposed	14.1	1.9
Vista Pacifico LNG	Sinaloa	Proposed	4.0	0.5
Salina Cruz LNG	Oaxaca	Proposed	3.0	0.4
Amigo LNG	Sonora	Proposed	7.8	1.0
Altamira FLNG	Tamaulipas	Proposed	4.2	0.6
Lakach FLNG	Veracruz	Proposed	1.4	0.2
Total			50.2	7.0

Source: Bloomberg

Fossil fuel extraction from U.S. public lands and waters results in considerable climate damage. In 2020, about 246 million tons of coal, 314 million barrels of oil and 3.3 billion cubic feet of natural gas were produced from 13 million acres of public lands, according to an [analysis](#) from the Bureau of Land Management. These federally owned lands provide about 9% of the nation’s gas supply, 7.6% of the nation’s oil supply and about 46% of the domestic coal supply, while producing more than 918 metric megatons of carbon dioxide equivalent emissions.

Keeping Natural Gas Exports Under Control

Under a federal law passed in 1938, natural gas exporters need explicit [approval](#) from the federal government, which determines whether exporting gas is consistent with the public interest.

The Department of Energy’s current public interest assessment relies heavily upon a rosy 2018 [macroeconomic study](#) commissioned by the Trump Administration that concludes, in part, that LNG exports won’t result in higher prices. The study also claimed, preposterously, that consumers would benefit due to their natural gas industry stock

market investments, claiming that “households who hold shares in companies that own liquefaction plants receive additional income from take-or-pay tolling charges for LNG exports.” The study failed to mention that few low-income people own any stock, let alone shares of natural gas exporters. Only 25% of U.S. households earning less than \$40,000 per year have any stock holdings, [according to Gallup](#).

Without a mechanism to protect consumers from high prices, shipping massive quantities of U.S. gas overseas fails to serve the public interest and sets the world on a course for continued climate destruction. Instead, the U.S. and world leaders must seize the moment and aggressively move away from fossil fuels.

Australia’s example highlights the pitfalls of prioritizing unregulated LNG exports. The country has worked to boost its export business, becoming the second largest LNG exporter in the world. This gambit caused domestic natural gas prices to skyrocket and forced Australia to enact a law to attempt to limit exports and hold down prices. This mechanism to control [Australian gas exports](#) was set up in 2017. In the event of a domestic supply shortfall, the Australian government can require LNG exporters to send gas to the domestic market.

Table 1: Existing U.S. LNG Export Terminals

Project Name	State	Owner/Operator	Max export capacity (billion cubic feet/day)	Units In Operation	Commercial start date (first unit)
Sabine Pass	LA	Cheniere Energy	4.55	6	May 2016
Corpus Christi	TX	Cheniere Energy	2.4	3	April 2018
Freeport	TX	Freeport LNG Development LP	2.38	3	November 2019
Cameron Parish	LA	Sempra LNG	1.98	3	July 2020
Calcasieu Pass	LA	Venture Global LNG	1.58	18	May 2022
Cove Point	MD	Berkshire Hathaway/Dominion /Brookfield Asset Management	0.82	1	March 2018
Elba Island	GA	Kinder Morgan	0.36	2	Sept. 2019

Source: U.S. Energy Information Administration liquefaction [tracker](#).

Table 2: U.S. LNG Terminal Additions & Expansion Projects (Under Construction)

Project name	Location (state)	Owner/Operator	Max export capacity (billion cubic feet/day)	Units	Expected Start Date
Golden Pass	TX	Qatar Petroleum, ExxonMobil	2.4	3	2023
Plaquemines LNG Phase 1	LA	Venture Global LNG	1.8	24	2024
Corpus Christi Liquefaction Stage III	TX	Cheniere Energy	1.6	14	2025

Source: U.S. Energy Information Administration liquefaction [tracker](#), analysis of proposed [expansions](#).

Table 3 U.S. LNG Terminal Additions & Expansion Projects (Planned)

Project name	Location (state)	Owner/Operator	Max export capacity (billion cubic feet/day)	Proposed Units
Cameron LNG expansion	LA	Cameron LNG, LLC	0.89	1
Magnolia LNG	LA	Glenfarne Group	1.2	n/a
Lake Charles LNG	LA	Energy Transfer LP	2.3	3
Plaquemines LNG Phase 2	LA	Venture Global LNG	1.4	18.0
Driftwood LNG	LA	Tellurian, Inc.	3.64	5
Freeport LNG expansion	TX	Freeport LNG	0.67	1
Port Arthur LNG	TX	Sempra Energy/ConocoPhillips	1.8	2
Texas LNG	TX	Glenfarne Group	0.56	2
Rio Grande LNG	TX	Rio Grande LNG, LLC	3.61	5
Gulf LNG	MS	Kinder Morgan et al.	1.43	2
Delfin FLNG	Offshore/Floating in Gulf of Mexico	Fairwood Group	1.6	4
Alaska LNG	AK	Alaska Gasline Development Corp.	2.55	3

Source: U.S. Energy Information Administration liquefaction [tracker](#).

Conclusion and Policy Recommendations

The U.S. fossil fuel industry long claimed fossil fuel exports would lower costs for American consumers and create jobs. But the push to expand both domestic production and exports has instead brought major negative consequences – for consumers, for disadvantaged communities living near petroleum infrastructure, for public lands and waters and for the planet. The fossil fuel industry has hailed the twin booms in oil and natural gas exports, claiming that they will be a boon to American consumers and national security. But the economic instability and damage to local communities and the planet created by this rapid export expansion are only now becoming clear.

Allowing unlimited exports of crude oil and natural gas latches the U.S. economy to unstable energy prices, further locking the world into energy sources subject to wild price swings, and that exacerbate rather than ease global conflict. Doing so disregards the immense human, ecological, economic, and societal threats our world already faces because of climate change. To stem climate damage and cushion consumers from volatile energy prices, Public Citizen recommends the following policy steps:

- Congress should place a windfall profits tax on oil and gas producers and exporters, taxing excess profits and sending the proceeds back to Americans. This idea, which has been [embraced in Europe](#), would ensure that giant oil companies don't pocket all of the profit from skyrocketing prices unrelated to their cost of production and would offset the pain to consumers from price spikes.
- The Biden administration should subject crude oil exports to regulatory oversight to ensure that they do not result in higher prices for vulnerable Americans and are not contributing to domestic supply shortages. Though Congress lifted the ban on crude oil exports in 2015, the president still has emergency authority to limit exports with the goal of protecting consumers.
- The Biden administration should assess the impact refined petroleum product exports have on domestic markets to ensure the protection of American families. Regulating the export of refined petroleum products could allow gasoline distributors to tell federal authorities if they are having trouble obtaining reasonably priced fuel, which would allow trigger export regulations that would allow the federal government to require domestic supply needs to be met first.
- No new liquefied natural gas export terminals should be approved by the U.S. government, and the Department of Energy must update its public interest assessment of LNG exports. That assessment must include a detailed study of impacts on vulnerable communities. The Energy Department must respect sacred lands and acknowledge claims made by Indigenous Peoples. The analysis must also examine the role exports play in contributing to income inequality and contributing to economic hardship in communities of color. Measuring the impact

higher energy prices have on low-income households is necessary to demonstrate whether LNG exports are consistent with the public interest.

The Russian invasion of Ukraine has made clear that the boom in U.S. production and exports has not removed Americans from the wild swings of energy markets. Indeed, with the U.S. economy now more tightly interlinked with global energy markets, consumers are even more vulnerable to international supply shocks and punishing price swings. In the long run, we must as a planet wean ourselves from our dangerous dependence on fossil fuels that have sowed turmoil and chaos, as has been so evident during this tumultuous year. Lawmakers and the Biden Administration must be skeptical about industry-supported policies that further a massive expansion of fossil fuel infrastructure and put industry profits over people.