

**Written Testimony Of
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**U.S. House of Representatives
Committee on Oversight and Accountability
Subcommittee on Economic Growth, Energy Policy, and Regulatory Affairs**

Chairman Fallon, Ranking Member Bush, and distinguished members of the subcommittee, thank you for inviting me to testify here today. I am here to testify in my capacity as President at the Energy Workforce & Technology Council.

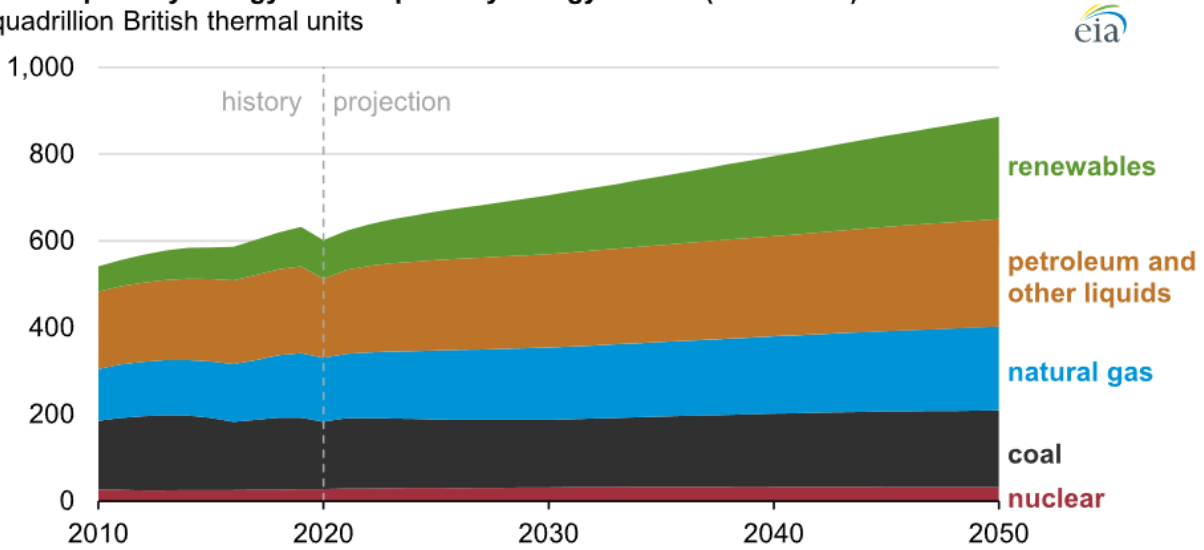
Energy Workforce & Technology Council is the national trade association for the energy services and technology sector, representing over 200 companies and employing more than 650,000 energy workers, manufacturers and innovators in the energy supply chain. Our workforce is in all 50 states, with representation in the vast majority of congressional districts across the country. Our membership ranges from large energy services companies with global operations all the way down to small family-owned well-servicing companies that operate locally within the U.S. Our member companies provide the United States and the world with energy in the most environmentally safe, efficient, and responsible way possible, and our sector is leading the development of technology that will ensure our country maintains energy security that will power our economy and protect our way of life for generations to come.

I appreciate the opportunity to testify on the challenges and opportunities in oil and gas production in the United States. The United States is blessed with tremendous sources of domestic energy that, if utilized fully, can protect us from suffering a similar energy-reliance disaster as experienced in Europe since the Russian invasion of Ukraine. In addition to ample renewable energy sources, the United States boasts multiple basins with significant oil and natural gas reserves. Very few countries in the world are lucky enough to have these resources available locally. As long as we continue to allow Americans to access these resources, we will always have enough energy to take care of our people as well as our friends and allies. Unfortunately, our worst enemy is often ourselves and we continue to make policy decisions that limit and complicate our access to these resources.

The domestic production of energy is critical to our national security. Despite statements by the current Administration to the contrary, the truth is that the United States and the world will need a lot more oil and gas in the coming decades, even as new forms of energy come online. The U.S. Energy Information Administration (EIA) predicts that the worldwide demand for all forms of energy will increase by 50% by 2050, as seen in Figure 1. More recently, AI and data centers are fueling a huge increase in power demand forecasts throughout the country. The North American Electric Reliability Corp. Long Term Reliability Assessment projected new electricity demand in 2023 was up to 563.9K gigawatt hours, up from 220K in 2022. There is simply no

way to meet this growing demand without a tremendous buildout in natural gas power generation. A key to ensuring that the domestic production of oil and gas continues is to ensure that there are ample markets for our products to be sold and to maintain prices at a level that will continue to incentivize production.

Global primary energy consumption by energy source (2010–2050)
quadrillion British thermal units



Source: U.S. Energy Information Administration, *International Energy Outlook 2021* Reference case
Note: Petroleum and other liquids includes biofuels.

Figure 1 EIA projects nearly 50% increase in world energy use by 2050, led by growth in renewables (U.S. Energy Information Administration, 2021)

Offshore Production Challenges

Unfortunately, instead of taking steps to incentivize the production of more energy to meet this growing demand, the Biden administration has used every delay tactic and legal maneuver possible to deny American’s access to the resources located offshore the United States. It took Congress to pass language in the Inflation Reduction Act to force Interior to restart lease sales at all, despite the Outer Continental Shelf Lands Act (OCSLA) requiring the preparation and maintenance of forward-looking five-year plans¹. Even then, the 5-year plan Interior released over a year late includes the smallest number of lease sales in the history of the program.

Delays by this Administration in restarting the plan have ceased exploratory well drilling, reduced the industry spending levels, drastically decreased employment across the offshore energy sector, lessened gross domestic product (GDP) and government revenues and plummeted oil and natural gas production across the Gulf of Mexico. Limiting lease sales to such an

¹ (Office of the Law Revision Counsel of the United States House of Representatives, n.d.)

artificially low number harms the U.S. economy, U.S. employment and forces the United States and our allies to use oil and gas from less responsible and reliable sources.

In 2022, the Gulf of Mexico offshore oil and natural gas industry supported an estimated 372,000 jobs in the United States². According to an Energy & Industrial Advisory Partners and National Ocean Industries Association report, in 2022 alone, activity in the Gulf of Mexico contributed approximately \$30.8 billion to the U.S. GDP. Looking ahead, the report indicates the industry is anticipated to maintain a consistent contribution, averaging about \$31.4 billion of GDP per year over the forecast period from 2022 to 2040. Assuming no further delays, this revenue source is expected to average an annual projection of over \$7.4 billion from 2022 to 2040. The Administration’s delays and limitations on offshore lease sales not only harm the U.S. economy, employment rates, and energy production but also jeopardize our reliance on responsible and reliable energy sources, impacting both domestic and international interests.

Economic Impact	Base Case Projection Average Annual (2022-2040)	Consequences of a 5-year Leasing Program Delay Reductions from Base Case Projection		
		Maximum Annual Impact	Average Annual Impact (2022-2040)	Total Cumulative Impact (2022-2040)
Capital Investment and Spending (\$ Billions)	\$30.6 / yr.	-\$10.7 / yr.	-\$5.3 / yr.	-\$99.9
Employment (jobs)	372,012	-115,942	-57,259	N/A
Contributions to GDP (\$ Billions)	\$31.4 / yr.	-\$10.0 / yr.	-\$5.0 / yr.	-\$95.0
Government Revenues (\$ Billions)	\$7.4 / yr.	-\$2.5 / yr.	-\$1.5 / yr.	-\$27.8
Oil and Natural Gas Production million of barrels oil equivalent	2.62 / day	-0.88 / day	-0.48 / day	-3.34 Billion Barrels (19-year Total)

Source: Energy and Industrial Advisory Partners

- The Base Case assumes a continuous leasing program including lease sales in the year 2022.
- The 5-year Program Delay Case assumes the first lease sale for the next 5-year Program will occur in 2028 with continuous lease sales thereafter.

Figure 2 Key Findings: Consequences of a 5-year Leasing Program Delay (Energy & Industrial Advisory Partners, 2022)

Limiting access to the resources in the Gulf of Mexico may also result in the use of higher emission energy sources. According to the 2022 NOIA report, the increase in U.S. Gulf of Mexico production, if it were to offset foreign crude or condensate, would significantly reduce carbon intensity. This reduction would amount to a remarkable 46% decrease in the international average carbon intensity for the displaced oil. This is equivalent to removing 11.3 CO₂e kg/bbl

² (Energy & Industrial Advisory Partners, 2022)

from the current global average of 24.4 CO₂e kg/bbl³. The U.S. Gulf of Mexico stands out as a region with some of the lowest carbon barrels of oil, particularly when compared to other oil-producing regions. A significant contributor to this is effective methane management. U.S. offshore operations in the Gulf of Mexico maintain stringent controls on methane emissions, resulting in notably lower emissions than those observed in other producing regions. The Gulf is also subject to a strong regulatory oversight framework and has adequate pipeline infrastructure to move product to market safely and efficiently.

The U.S. Gulf of Mexico boasts approximately half the carbon intensity of other producing regions⁴. What's more, this environmental performance continues to improve. From 2011 to 2017, according to the BOEM, carbon emissions from U.S. Gulf operations decreased by approximately 60%, even as oil production increased by over 35%⁵. According to the 2021 Wood Mackenzie Emissions Benchmarking Tool, the deepwater and continental shelf regions have the lowest Scopes 1 and 2 emissions intensity compared to other oil producing areas at ~20KgCO₂e/boe. This low emissions intensity also translates over internationally, where U.S. GOM has significantly lower GHG intensity than other producers, including Norway, according to a 2023 ICF Consulting Study.

LNG Permitting “Pause”

On January 26th of this year, the Administration announced that it would “pause” new approvals for LNG export applications to non-FTA countries while it conducted a review that will “look at the economic and environmental impacts of projects seeking approval.” Many of the projects whose permit approval will be paused will ultimately ship LNG to Europe, Asia and other allies that do not have a Free Trade Agreement (FTA) with the United States. This means that in addition to the FERC approval, these projects will necessitate a DOE “national interest” analysis. This is incredibly impactful, as 80% of US LNG exports go to non-FTA countries. European countries are especially vulnerable to this pause, and they are working to find consistent and predictable sources of gas to power their economies after the disruption to Russian gas caused by the invasion of Ukraine.

Shockingly, the Administration has taken this action despite the Presidents pledge to do the opposite. On March 25th, 2022, President Biden and European Commission President Ursula von der Leyen stood together and jointly pledged to work together to lay the framework for a large increase in US LNG to be imported into the EU to allow their economies and population to survive without being beholden to Russian gas. This pledge would not only benefit our allies but would dramatically benefit the US economy and the US energy workforce. An analysis of the president’s pledge found that the benefits to the United States could include \$63 billion in capital expenditures, a GDP boost of \$46 billion, and 71,500 jobs supported annually from 2025-2030.

³ (Energy & Industrial Advisory Partners, 2022)

⁴ (Energy & Industrial Advisory Partners, 2022)

⁵ (Energy & Industrial Advisory Partners, 2022)

The shale gas revolution has triggered a seismic shift in the dynamics of U.S. natural gas supply and demand, heralding an era characterized by abundant and affordable natural gas resources, consequently propelling the United States into global energy dominance. Over the past decade, prices at the Henry Hub have maintained an average of approximately \$4.10/MMBtu, marking a remarkable reduction of over 54% compared to the preceding decade. Despite the unprecedented surge in natural gas exports witnessed in the first half of 2023, prices at the Henry Hub plummeted to \$2.48 per MMBtu, marking the lowest six-month average in over 35 years⁶ (not accounting for the period during the COVID-19 pandemic). The development timelines for LNG projects afford U.S. natural gas producers ample opportunity to ramp up production to meet the demands of burgeoning LNG export ventures. Consequently, the U.S. natural gas market accommodates the increased demand from new LNG terminals well before their operation, with the predictability of long-term contracts ensuring minimal fluctuations in domestic prices. This predictable demand also helps cushion for domestic workers from seasonal and weather-related price fluctuations in the price of gas.

U.S. LNG exports yield significant economic advantages by bolstering natural gas production, thereby enhancing labor income within the sector and driving down the costs of imported goods while bolstering the value of the dollar, consequently stimulating heightened economic activity, according to the Center for LNG. Furthermore, the study shows that U.S. LNG exports will serve to stabilize the domestic market while incentivizing increased natural gas production, thereby catalyzing billions of dollars in fresh investments that benefit local communities. This infusion of capital not only generates tax revenues but also fosters employment opportunities, with job creation numbering in the thousands during the construction phase and extending into the tens of thousands across the supply chain during operational phases, including manufacturing roles.

Here in Texas, in addition to oil and gas, we are known for Blue Bell Ice Cream. They like to say we can eat all we can and sell the rest. The same can be said for natural gas. We have enough gas in the United States to provide cheap, low emissions energy for our population and sell the rest.

Ironically, this pause was justified by an alleged need to review the “environmental impacts” of the projects. The reality, however, is that LNG exports and the use of natural gas for power generation actually lower emissions dramatically. According to the EIA, the United States has lowered our emissions since 2005 more than nearly anywhere in the world, primarily by transitioning coal-fired power generation to natural gas. Why would we deny our friends and allies abroad the ability to do the same?

Methane Tax

In addition to limiting access to resources, the Administration has taken steps to increase the cost of domestic production of energy. Beginning in 2025, Methane Emissions Reduction Program (MERP) will implement a charge (or tax) on the reported prior-year tons of methane

⁶ (Energy Ventures Analysis, 2024)

emissions from oil and natural gas systems that exceed more than 25,000 metric tons of carbon dioxide equivalent gas. The fee will start at \$900 per metric ton this year, rising to \$1,200 in 2025 and reaching \$1,500 in 2026 and going forward. To complicate the implementation and understanding of this new fee structure to the industry, it comes right on the heels of the newly finalized EPA requirements for methane emissions, which kick in later this decade.

Energy Workforce has opposed the implementation of this new fee, as we believe it will raise the cost of producing energy in the United States and could disproportionately impact small producers. America is lucky to have both large oil and gas producers and smaller independents who often have varying types of business models. This variation ensures that we receive the maximum amount of production which benefits all Americans.

Opportunities in Energy Production

Not only can we increase oil and gas production in the United States by reducing the regulatory burden, but technological advancements are allowing us to produce more oil and gas more efficiently than ever. In addition to these efficiencies and innovations, producing oil and gas in the United States, including offshore, stands out for its significantly lower carbon intensity compared to other countries, with stringent methane management contributing to reduced emissions. Policymakers should focus on encouraging and incentivizing innovation rather than taxing production, given the industry's track record of developing technologies and addressing emissions.

Efficiencies & Innovations in Oil & Gas

Drilling efficiencies have increased dramatically in the past ten years. In March of this year, according to Baker Hughes, there were 629 drilling rigs active in the US. That's down 16% from the 732 total rigs around the US during the same time last year⁷. However, US crude output is the highest ever. What does this mean? It means that we are using less energy to make energy than ever before. This is good news. It also means that the per barrel emissions rate is significantly lower. What are these innovations?

Companies in the oil & gas sector maintain a relentless focus on innovation due to several key reasons. Firstly, there is a pressing demand for cost-effective and safe drilling methods, propelling ongoing patent innovations within the industry. Technologies like artificial intelligence (AI), Internet of Things (IoT), 3D printing, and big data have become increasingly crucial, pushing companies to explore and integrate them into their operations. Automated drilling tools, powered by advanced technology, offer significant benefits such as enhanced drilling efficiency, greater accuracy, reduced human errors, and improved safety measures. This continuous evolution in drilling automation and innovation is a key aspect of the energy services and technology sector as our members look to optimize performance and maximize production.

Energy service companies developed the process of "EFrac" which involves electrifying the hydraulic fracturing process by recycling excess natural gas that would otherwise be released, using it to power turbines for fracturing and pumping. This approach leverages the significantly

⁷ (Mathews, 2024)

lower cost and abundance of natural gas, offering substantial emissions benefits with a 25% reduction in emissions and up to 90% savings in fuel costs. This dual advantage makes electric frac a rare win-win scenario, addressing both cost efficiency and environmental concerns. Natural gas emits fewer greenhouse gases when combusted compared to diesel, approximately 27% less CO₂⁸, and is abundant in areas like the Permian.

Energy Workforce members are also making lower emissions energy possible by building on our industry's long history of developing and deploying technological solutions on a global scale. These technologies include comprehensive methane monitoring, comprised of leak detection that includes the location and rate quantification in real time so that operators can take immediate action to reduce greenhouse gas (GHG) emissions and save costs. These technologies have been available to operators since the 2010s and include a wide range of options. For example, since 2018, a team has been utilizing drones equipped with methane detection cameras and sensors in the Permian Basin. It has conducted over 1,000 inspections using drones and drone mounted sensors, combined with an artificial intelligence (AI) enabled software platform. This effort is contributing to meeting an operator's goals of maintaining methane emissions intensity below 0.2% by 2025 and meeting the requirements of the Oil and Gas Methane Partnership (OGMP) 2.0 framework.

Similarly, since 2018, continuous commercial monitoring has been available using a sensor network strategically placed at an oil or natural gas production site to monitor for emissions. Industry-wide, there are at least 5 million sensor operation hours for continuous monitoring, providing years of reliable and actionable emissions data for operators. The real-time and historical trend data available from continuous monitoring has provided many advantages in data science and process automation for operators including new levels of emissions visibility and how emissions correlate to the operational schedules and processes. Ultimately, this provides a better source of information to help prioritize repair efforts and significantly shortens the time between initial detection and repair.

All of these innovations and efficiencies will continue to grow. America is leading the way. The American energy outlook is overall very positive. We have abundant resources, and American ingenuity continues to allow us to produce better energy. American energy workers have a bright future ahead of them. If we make the right policy choices, we can take care of our own energy needs as well as supporting our friends and allies. This will ensure that our economy will have the energy it needs to continue to grow and American families will continue to have access to the most affordable and reliable energy system that the world has ever seen.

⁸ (U.S. Energy Information Administration, 2023)

References

- Energy & Industrial Advisory Partners. (2022). *The Economic Impacts of a 5-Year Leasing Program Delay for the Gulf of Mexico Oil and Natural Gas Industry*. Washington D.C.: National Ocean Industries Association.
- Energy Ventures Analysis. (2024). *Impact Analysis of U.S. Natural Gas Exports on Domestic Natural Gas Pricing*. Vienna.
- GlobalData. (2023, October 11). *Leading innovators in automated drilling tools for the oil & gas industry*. Retrieved from Data Insights: <https://www.offshore-technology.com/data-insights/innovators-automated-drilling-tools-oil-gas/?cf-view&cf-closed>
- Mathews, C. (2024, March 6). *The Secret to Record US Oil Output? Drilling Efficiencies—EIA*. Retrieved from HART Energy: <https://www.hartenergy.com/exclusives/secret-record-us-oil-output-drilling-efficiencies-eia-208390>
- Office of the Law Revision Counsel of the United States House of Representatives. (n.d.). *Title 43*. Retrieved from United States Code: <https://uscode.house.gov/view.xhtml?path=/prelim@title43/chapter29&edition=prelim>
- U.S. Energy Information Administration. (2021, October 7). *TODAY IN ENERGY*. Retrieved from EIA projects nearly 50% increase in world energy use by 2050, led by growth in renewables: <https://www.eia.gov/todayinenergy/detail.php?id=49876#>
- U.S. Energy Information Administration. (2023, September 7). *Carbon Dioxide Emissions Coefficients*. Retrieved from https://www.eia.gov/environment/emissions/co2_vol_mass.php