COMMITTEE TO UNLEASH PROSPERITY


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# The Cost of Biden's War on Oil and Gas:

## Billions of Barrels and Dollars Lost

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# Executive Summary

The Biden administration has sent conflicting messages to the U.S. oil and gas industry. On the one hand, Biden has promised to set the U.S. on a course of eliminating U.S. oil and gas over the next two decades. He has said that his long-term goal would be to "shut down" oil and gas production as part of his climate change strategy. He has also canceled pipelines, reduced drilling on public lands, and instituted tough new environmental standards that raise the cost of drilling. His new climate change legislation imposes new taxes on the oil and gas industry.

On the other hand, he has said multiple times he is "doing all I can" to reduce gas prices at the pump. Since last year he has claimed that the U.S. is near "record levels" of oil and gas production.

This study examines what has happened with oil and gas production when we adjust for the large increase in the world price since Biden entered office, and the upward supply trends that had widely been expected to continue. Coincident with Biden's new anti-energy policies, vigorous "Environmental, Social and Governance" (ESG) investing, and rising business tax rates, U.S. oil production has fallen 1-5 million daily barrels short of previous trends. Increased costs of oil and gas extraction are reducing annual GDP by about $100 billion.

Anti-energy policies in the United States enrich the major oil producers in Asia and the Middle East, some of whom use their wealth to fund terrorism. Indeed, they are enriched twice by our policies. One benefit they get is that subtractions from U.S. production are subtractions from world production that contribute to higher world oil prices. The second benefit is that undermining shale activity in the U.S. gives OPEC more pricing power, because we are no longer as able to respond to OPEC production cuts with production increases of our own. Indirectly, Biden's policies regarding U.S. production are reducing OPEC production too.

# Introduction

President Biden and others in the White House claim that the U.S. is producing as much oil and gas as ever. The U.S. is, Biden said in 2022, "approaching record levels of oil and natural gas production."

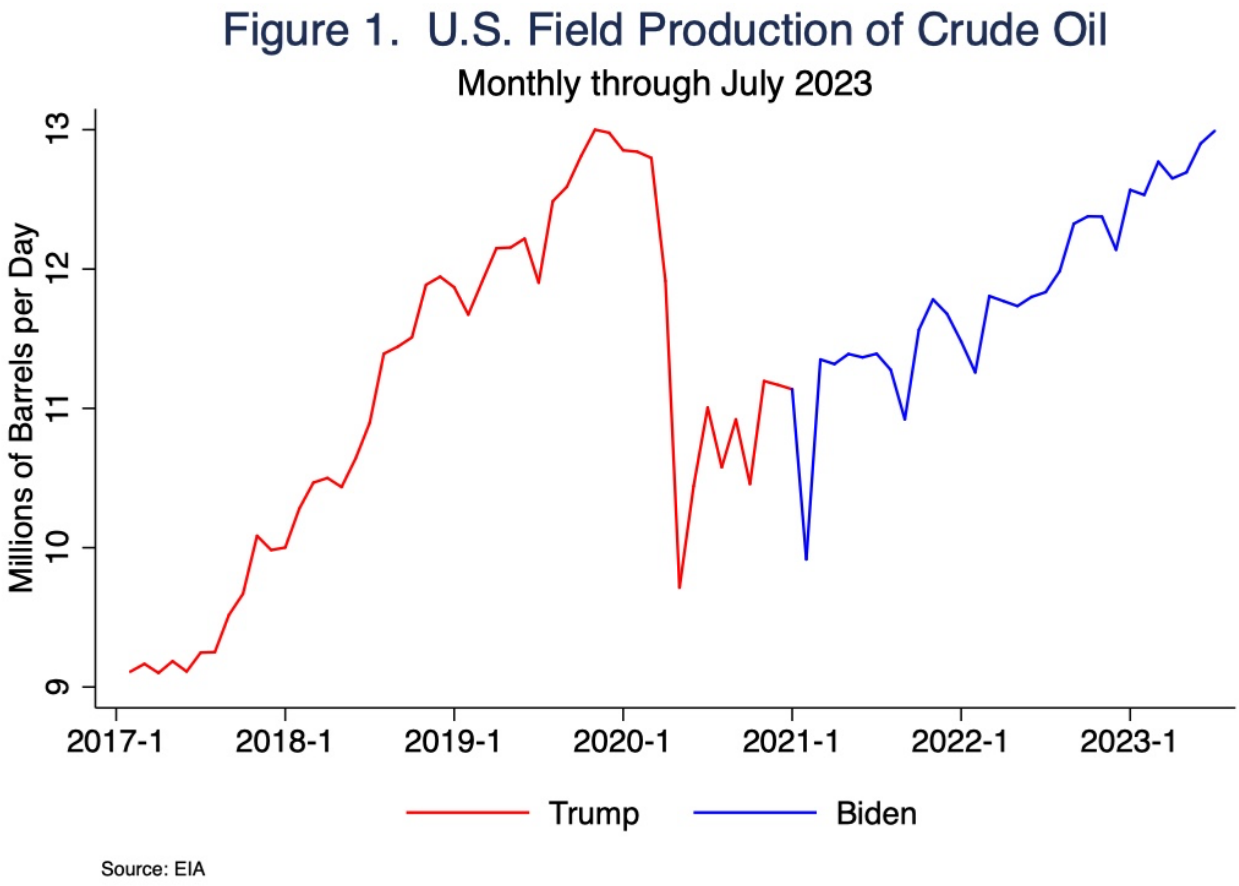
The implication is that Biden's anti-fossil fuels policies – ranging from taking hundreds of thousands of acres off-line for drilling, to canceling pipelines, to restrictive environmental regulations that make drilling more expensive – are not the reason for the energy crisis and high gas prices at the pump. He points to high profits of major oil companies as evidence that corporate policies, rather than public policies, are to blame.

The Biden administration's hostility toward the oil and gas industry, both in rhetoric and policy, is well-documented. The Institute for Energy Research has chronicled dozens of actions and orders by the Biden administration that have blocked or created financial disincentives for drilling.

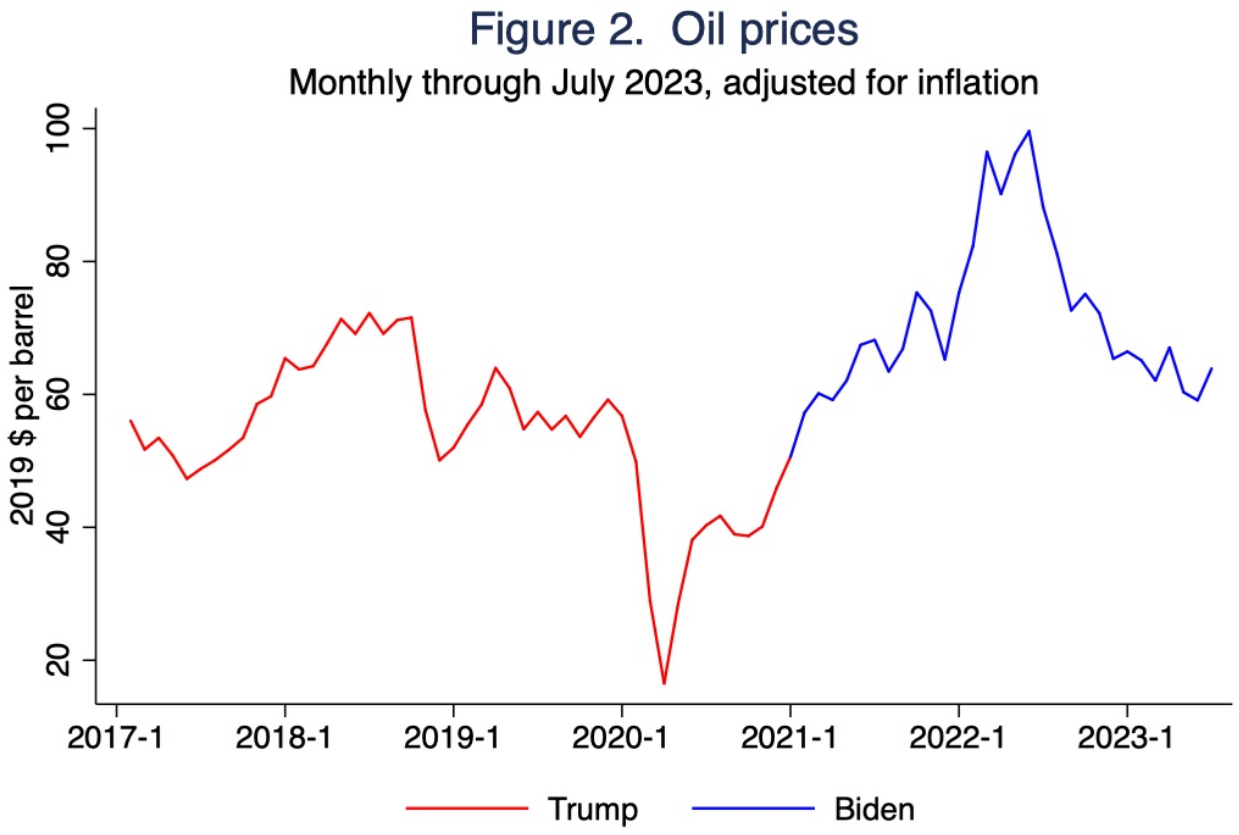
While it is undoubtedly true that the Russian invasion of Ukraine has contributed to rising energy prices around the world, the real question is why the United States energy companies are not filling that gap in output given the financial production incentive of at today's high prices.

The evidence suggests that the Biden anti-fossil fuel policies have reduced U.S. oil and gas output below what it would have been.

First, let's examine energy production under the Trump administration. By 2019, we had achieved Trump's goal of energy independence. That is to say, the U.S. was a net EXPORTER of oil, gas, and coal. The Energy Information Agency had predicted that the U.S. could produce as much as 15 million barrels of oil under current trends.




According to EIA, in July of 2023 (the latest U.S. data available), U.S. oil production was close to passing 13.0 million barrels, which coincides with the peak reached under Trump. But that is NOT the end of the story. The price of oil has been MUCH higher than the price when Trump was president. Adjusted for inflation, the average world price throughout Trump's presidency was $54 a barrel, and rarely exceeded $65. During Biden's presidency, the average was $72 through July 2023 and averaged $83 in 2022. See Figure 2.




Source: EIA data on Cushing OK WTI Spot Price FOB

# The U.S. Used to be an Engine of Technological Progress

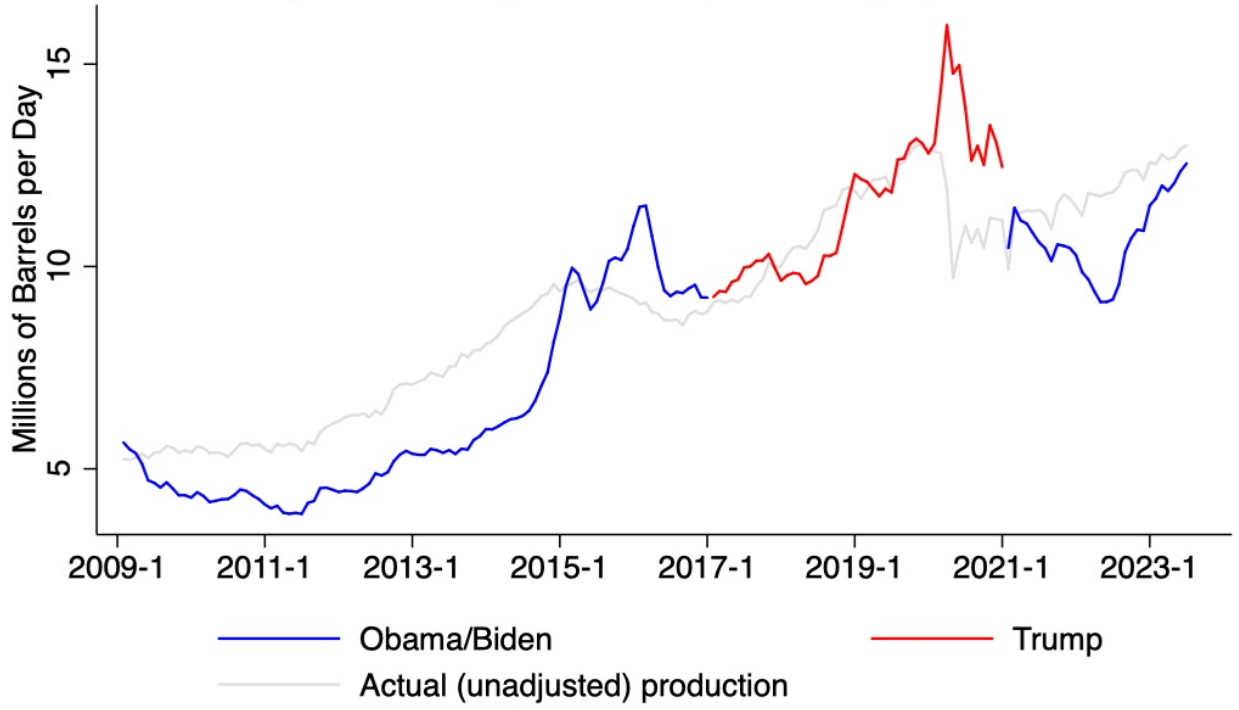
Even that is not the end of the story. A major driver of U.S. production has been the technological progress achieved by both small and large oil and gas companies. New methods are continually being discovered and perfected, while personnel become increasingly skilled at applying them. All of this serves to reduce extraction costs. More wells are found to be profitable at a price of, say $60 per barrel than would have been profitable with the old technology and labor force.

One productivity metric is the output generated by the average new well. New wells are becoming more productive each year, despite being more difficult to access than their predecessors. In January 2017, new wells were producing an average of 682 barrels per day of oil and 3.3 million cubic feet of natural gas. By January 2020, both productivity measures had increased an average of about 23 percent. Although productivity continued to increase during the first year of the pandemic, it fell significantly between January 2021 and September 2023, both in absolute terms and relative to previous trends.

A second metric of productivity growth in oil and gas is the position of the supply curve. That is, how much more would the industry produce over time if inflation-adjusted oil prices remain constant? Those trends are illustrated by Figure 3's blue and red series, which show what oil production would be each month if inflation-adjusted oil prices were the same as they were in 2019. An increase in these series reflects a reduction in extraction costs, which can come from additional knowledge, capital investment, or a more skilled workforce. Deregulation and tax cuts can also reduce extraction costs. Between 2016 and 2020, the U.S. petroleum supply curve shifted out by an average of 8 percent per year: from 10 MMb/d in 2016 to more than 13 MMb/d in 2020.[1]

## Figure 3. Oil supply shifts

### U.S. oil production adjusted for oil price changes, 2019 baseline




Note: When oil prices are high (low), actual production is adjusted down (up) to estimate what supply would be at 2019 prices.
Source: EIA

Declines in these series indicate rising extraction costs, which is one of the consequences of increased regulation, tax hikes, and investor unwillingness to fund petroleum companies. Given the prevailing prices since 2021, industry behavior strongly suggests that extraction costs have risen compared to the levels seen in 2019 and 2020. That is illustrated in Figure 3 by the Biden part of the blue series that drops to about 10 MMb/d from its average of about 13 in 2019 and 2020. Had previous trends continued, the blue series would pass 17 MMb/d in 2023. Instead, it is 5 MMb/d short of that.

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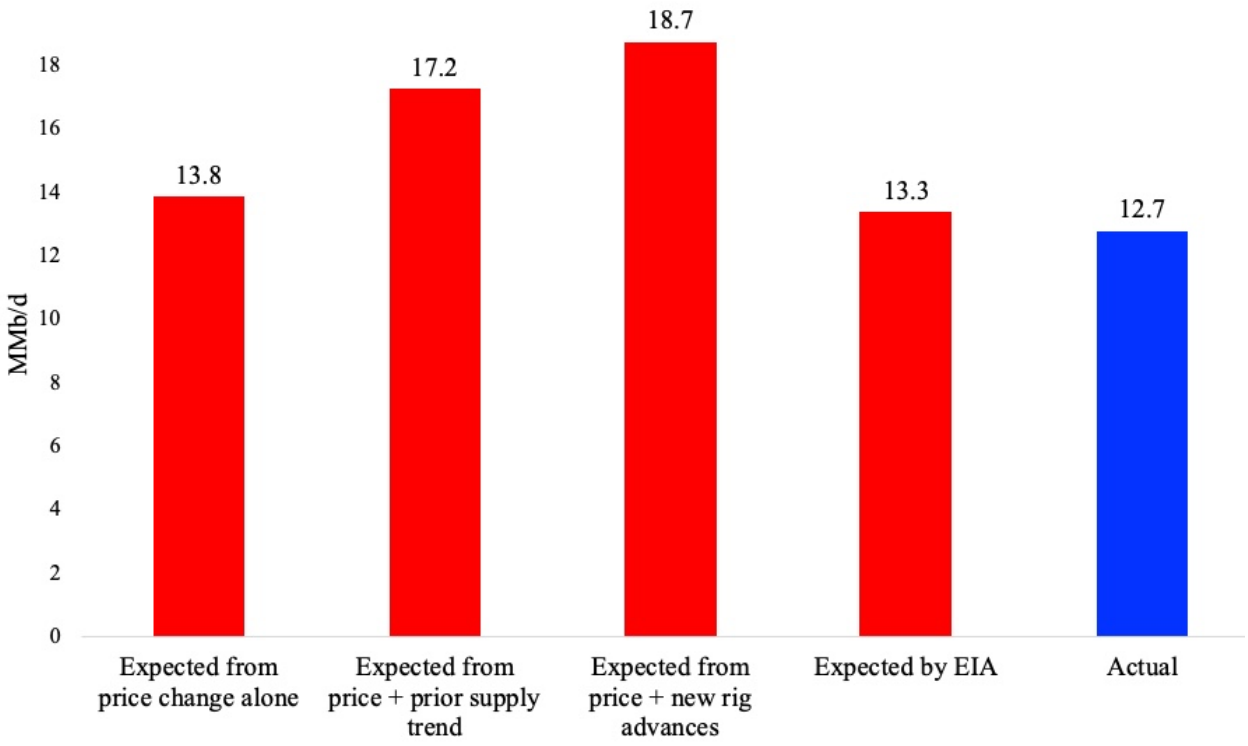
1 Although 2020 was a pandemic year, results are similar for 2016-2020 because "the effects of COVID-19 are primarily a short-tern demand-side shock" rather than an oil supply shock (see p. 21 of the 2021 Annual Energy Outlook).

Figure 4 shows projected U.S. production for January-July 2023, assuming supply shifts had continued beyond early 2021. Even without further shifts in the supply curve, the price increases alone should have driven production close to 14 MMb/d. Taking into account supply shifts consistent with previous trends (the second bar in Figure 4) or from new-rig trends (the third bar), suggests that production should have exceeded 17 or 18 MMb/d.

**Figure 4. Expected oil production for January-July 2023, by source of productivity estimate**



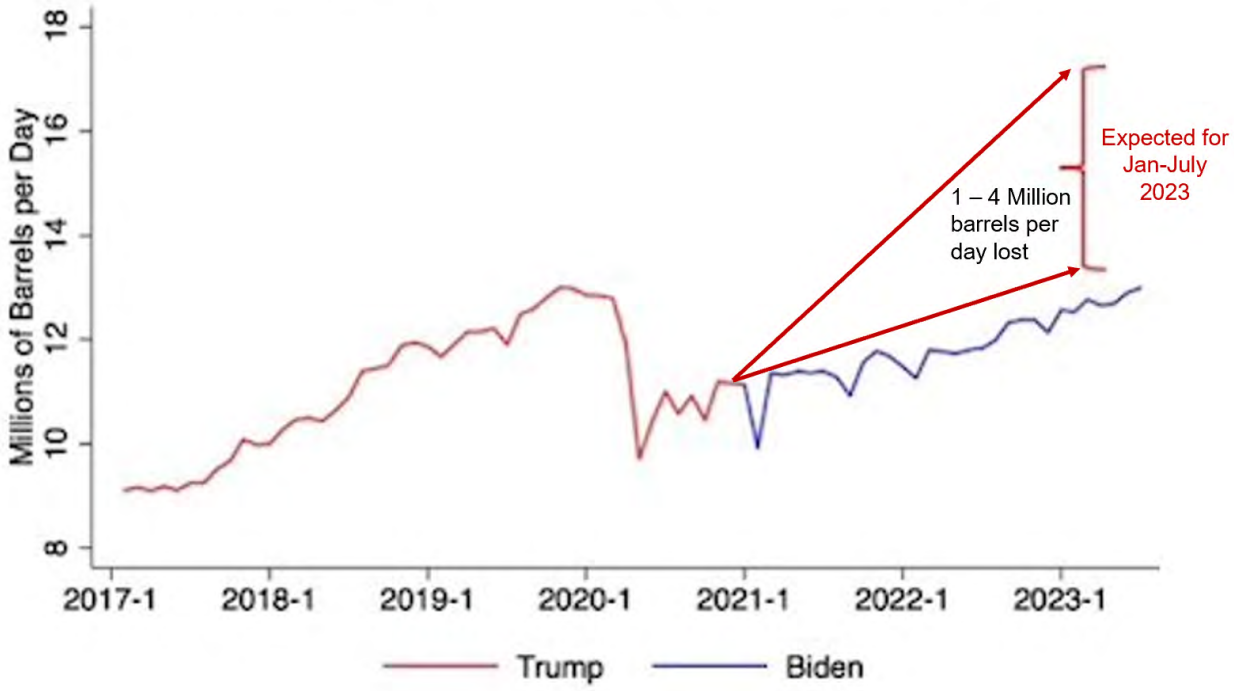

Sources: U.S. EIA monthly data through July 2023.
Note: Expectations are as of early 2021 for a period, such as Jan-July 2023, where oil prices are $63 per barrel in 2019 prices.

The U.S. Energy Information Administration's (EIA) forecasts of production consistently recognize that the U.S. is an engine of oil and gas productivity growth. Although the EIA lowered its forecasts in early 2021 due to new challenges oil companies faced in securing capital,[2] the agency still anticipated productivity growth to return. According to their modest forecast, U.S. production should have already reached 14 MMb/d by 2022. But, in fact, production had yet to reach 13.0 MMb/d even by July 2023. The surprisingly low production results are part of the reason why EIA cut its production forecasts in 2022 and, especially, 2023.

In summary, the U.S.'s previously impressive trend toward increasingly cost-effective methods of oil and gas extraction took a sudden turn in 2021. This is reducing both production and value-creation in the oil and gas industries. Figure 5 shows where we might be in 2023 compared to what has actually happened.

2 The capital constraints especially relate to Environmental, Social and Governance (ESG) movements among asset managers and the prospect of increased business tax rates.

Figure 5. Actual and Projected Oil Production




# The Natural Gas Story

Now shifting to natural gas, the story is similar because U.S. industry produces them in nearly fixed proportions. It too has fallen short of expectations.

Incidentally, in the summer of 2022 natural gas prices exploded to 10 times their "normal price," according to the Financial Times. The country that has gained the most has been Russia. But the U.S. could easily be exporting more American natural gas to Europe at lucrative rates if we had more LNG terminals and more accommodative shipping rules.

# More than $100 Billion in Annual Energy Industry Waste

In an earlier report, we explained how President Trump's regulatory and tax policies would have allowed U.S. oil and gas industries to produce more, at lower cost per barrel and cubic foot of gas. The combined addition to U.S. GDP would be roughly $100 billion a year for as long as the policies continued, even without any continued technological progress. The additional GDP is about twice that amount once we recognize that continued productivity growth in oil and gas should have pushed our production levels well beyond the 2019 highs.

We do not yet know whether the anti-fossil fuel policies just reduce oil and gas supply below an upward trend that nonetheless continues in parallel with the previous trend, or whether the technological progress itself is slowed. If the latter, the costs of these policies will be felt for many years into the future, even after (and if) a new administration has reversed them. The negative effects of regulation on the pace of innovation has already been observed in the nuclear-energy sector.

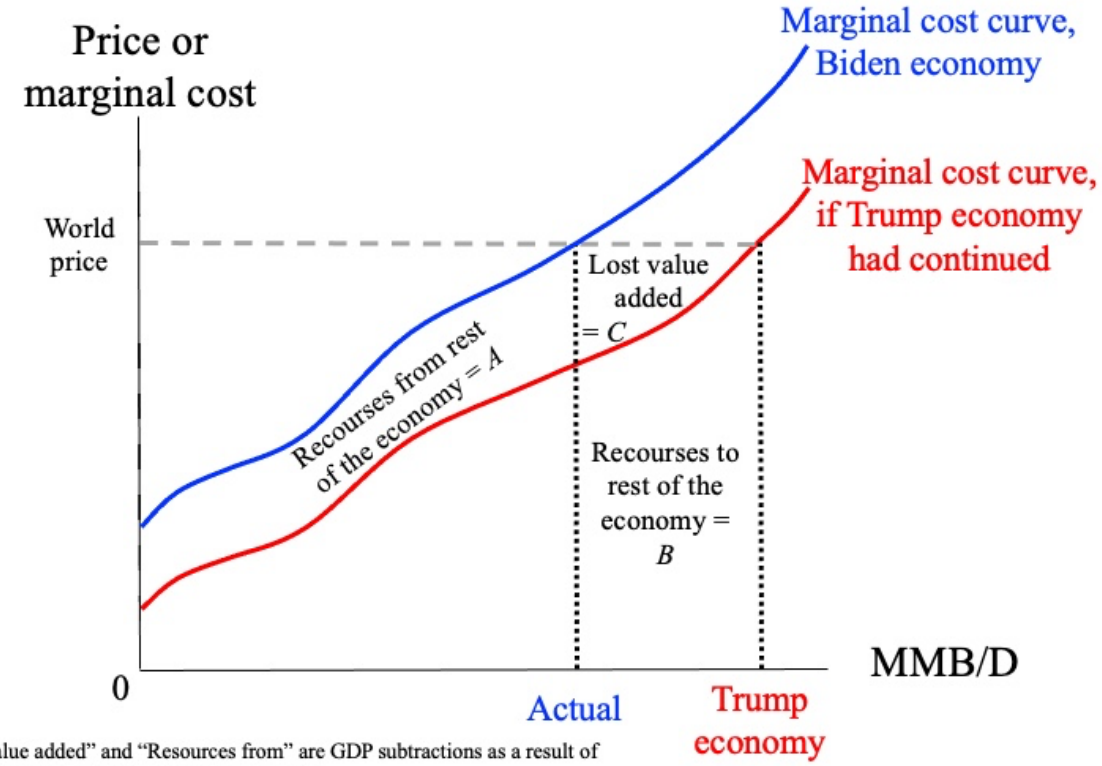
Some of this increase in production would surely bring DOWN prices, so it would be a win-win for America. Indeed, increasing U.S. production would go a lot further to reducing energy prices than President Biden's policy of releasing 145 million barrels (over about 250 days) from the Strategic Petroleum Reserve (SPR). For one, the magnitude of the releases are small compared to the shortfalls in U.S. production. In addition, once the 250 were over, the low SPR levels obligated the Biden Administration to both increase its petroleum *purchases* and reduce its future sales.

Policies more friendly to oil and gas production would mean more jobs, more GDP, lower gas prices at the pump, and less wealth for several autocratic governments around the world.

# Appendix: Petroleum Output and National GDP

We estimate that daily U.S. oil production is falling 1-5 million barrels short of where it would have been without the public policy and ESG headwinds that the industry has experienced since 2021. This appendix shows how we translate that shortfall into an effect on national GDP.

## Figure 6. Domestic Oil Supply and GDP




Note: "Lost value added" and "Resources from" are GDP subtractions as a result of Biden cost shift. "Resources to" are GDP additions.

The blue curve in Figure 6 represents domestic oil production as a function of the world price. Without the war on oil and gas, that supply curve would have been further to the right, as illustrated by the red supply curve. Equivalently, without the war on oil and gas, U.S. oil and gas extraction would be cheaper. Figure 6 contains the components required to estimate the effect on national GDP.

The daily revenue loss for U.S. petroleum industries is the product of the oil price and the reduced production. At $63 per barrel and 3 million barrels daily, respectively, that is $69 billion per year. It is represented in Figure 6 as the sum of areas *B* and *C*.

Less production by itself frees up labor, capital, and other resources for the rest of the economy. That is the area *B*, which in 2023 are enough resources to add $57 billion annually to the GDP of non-oil industries.

However, the production that does occur in the Biden economy costs more per barrel, which is why less is being produced compared to the alternative. These added costs are reflected in the area *A*, which subtracts about $34 billion annually from the GDP of non-oil industries (a net increase of $23 billion = $57b – $34b for the rest of the economy). The GDP of the entire economy is therefore reduced by *A* – *C*, which we estimate to be about $46 billion for 2023. We expect that supply restrictions in gas production has an additional effect of a similar magnitude.

The estimates are obtained by assuming that each supply curve has the same price elasticity, 1/2, everywhere on the curve.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