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ISSUE BRIEF | Energy & Environment

Beyond the Barrel: Refining's Role in Everyday Life

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TOPLINE POINTS

- Global demand for oil and gas will remain strong through 2050.
- Pro-energy policies (like "Drill Baby, Drill") combined with innovative, made-in-America technologies and policies (like fracking) will bolster domestic crude oil production. However, refineries are still needed to convert crude oil into usable products such as gasoline, propane, chemicals, and plastics.
- The U.S. operates 132 refineries, representing 20% of global refining capacity.
- Policy solutions should promote increased refining capacity, limit frivolous anti-energy litigation, stop the weaponization of capital against domestic energy producers, and bar the use of the "social cost of carbon" in agency rulemaking.

Introduction

Fossil fuels and nuclear power are the backbone of American energy dominance. Abundant natural gas provides low-cost, flexible energy for electricity generation, chemical and industrial processes, and heating. It also plays a critical role in bolstering our global food supply as a feedstock for fertilizers that sustain half of the world's population (Antonini, 2023). However, the "drill, baby, drill" policy is only a starting point for reliable, affordable energy. Our domestic refining industry transforms crude oil and natural gas liquids (produced by drilling) into the valuable products we use to heat our homes, power industry, and improve our lives. To protect access to these essential fuels, energy policies should resist efforts to restrict their use while also recognizing their benefits for human health and well-being, as well as for the nation's economy.

"Drill, Baby, Drill" is Only the Start

Together, coal, gas, and petroleum products (i.e., materials derived from crude oil; natural gas) provided for more than 80% of the nation's primary energy demand in 2023 (EIA, 2024a).

Demand for reliable energy continues to grow globally; the February 2026 EIA Short-term Energy Outlook noted that coal use exceeded initial January 2026 estimates by 10% (EIA, 2026). In fact, in a January 2026 Varney & Co. interview, former Secretary of Energy and Governor of Texas, Rick Perry, went so far as to predict the U.S. is headed back to using coal (Varney & Co., 2026). Growing demand for energy has also led to predictions that natural gas and petroleum will "remain the most-consumed sources of energy in the United States through 2050" (EIA, 2022).

However, only 20 years ago, there were serious concerns that the U.S. had limited natural gas reserves. Dire warnings that we were reaching "peak oil" led the headlines, and experts predicted fuel shortages that would lead to "war, starvation, economic recession, possibly even the extinction of homo sapiens" (Bailey, 2006).

> Fast Fact: U.S. crude oil production averaged over 13.6 million barrels per day (mmb/d) in 2025 (EIA, 2026).

Thankfully, our energy future has drastically improved. Innovative American companies have developed groundbreaking technologies such as hydraulic fracturing, helping to unlock our abundant oil and natural gas resources (Nash et al., 2022). "Fracking," as it is also known, has revolutionized hydrocarbon production, helping transform the U.S. from an energy importer, reliant on often unfriendly and volatile world markets, into a net energy exporter and the largest producer of crude oil ever (EIA, 2024a; Kreil, 2024).

"Green" Policies Limit U.S. Energy Abundance

Despite the apparent benefits of energy independence, environmental activists demand restrictions on fossil fuels—a direct threat to our energy self-sufficiency and well-being. Opponents vilify fossil fuels, seek to legislate and litigate them out of existence, and have tried to mandate the nation's transition to unreliable wind and solar energy. Ironically, sources such as wind and solar require fossil fuels at every stage of their manufacture and operation and are often sourced from strategic competitors such as China (Hayes & Nash, 2024). Nevertheless, even after decades of governments tilting the scales in their favor, these so-called renewables still accounted for less than 5% of primary energy consumption in 2023 (EIA, 2024b).

> Fast Fact: In 2023, wind and solar combined to make up only 2.6% of primary energy consumption in the U.S. (EIA, 2024b).

Fracking Promotes American Energy Dominance

A 2019 White House Council of Economic Advisers report explained how "from 2007 to 2019, innovation in shale production brought an eight-fold increase in extraction productivity for natural gas and a nineteen-fold increase for oil" (The Council of Economic Advisors, 2019). Using fracking technologies, the U.S. now produces more crude oil than any other nation, helping meet the growing global demand for refined fuels predicted by the EIA (Kreil, 2024; EIA, 2024d).

> Fast Fact: The United States is the world's largest natural gas producer, with 37,803 billion cubic feet (bcf) produced in 2023, which is roughly 26% of total world production (EIA, n.d.).

From Crude Oil to Refined Products

Exploration, drilling, production, and transportation of fossil fuels are the first steps in producing petroleum products; the next critical step is refining. We refine crude oil and natural

gas liquids to produce fuels such as gasoline, diesel, and propane. We also refine petroleum products to create thousands of useful products, including plastics, synthetic fabrics, pharmaceuticals, detergents, toiletries, and fertilizers (Ohio Oil and Gas Energy Education Program, n.d.).

Without natural gas, we would not have fertilizers that provide food for half of the world's population (Antonini, 2023). In fact, American farmers are one of the largest domestic consumers of natural gas, which they use for fertilizer, transportation fuels, and grain drying. Natural gas supports more than 17 million jobs and $1.75 trillion in GDP associated with American agriculture (American Gas Association, 2023).

Status of U.S. Refining Capacity

> Fast Fact: The U.S. has 132 operating refineries, representing nearly 20% of global refining capacity (EIA, 2024c; EIA, 2024d).

Currently, the United States operates nearly 20% of global refinery capacity: "18.4 million barrels per calendar day (b/cd) at the start of 2024" (EIA, 2024c; EIA, 2024d). In 2024, OPEC reported that global refining capacity had grown to 103.8 million barrels per day, with most of this growth occurring in China and the OECD Americas (OPEC, 2025). EIA projects that refining capacity will increase through 2028 to ensure sufficient global liquid fuel supplies through 2050 (EIA, 2022). Below are some quick facts:

- American refining capacity increased by 2% from 2023 to 2024 (EIA, 2024c). This was a welcome shift from the reductions seen since the nation reached an earlier peak of 18.98 million barrels per day in 2020.
- The number of operable refineries remained stable at 132 in both 2024 and 2025, representing a welcome increase from the recent low of 129 in 2021 (EIA, 2025).
- Carbon-reduction policies, such as low-carbon fuel standards and decarbonization mandates, at the state level put undue pressure on domestic refineries (Hayes, 2024a; Orr et al., 2024). Operators respond to these pressures by increasing prices, closing/relocating, or transitioning to expensive and wasteful biofuel production in states like California (Hack, 2024).
- Restricted refining capacity leads to fuel supply shortages, as in 2022 when destructive energy policies led to low inventories and record-high prices for diesel and gasoline (Hayes, 2022; Buchan, 2022; AAA, n.d.).

Continued Demand for Growth

> Fast Fact: Global demand for oil and gas is expected to remain strong through 2050.

While many governments around the world are sticking with dangerous and expensive net-zero and decarbonization goals, forecasts still predict that global demand for oil and natural gas will remain durable through 2050 at approximately 20 million barrels per day through 2050 (EIA, 2023; Antonini & Hayes, 2024; ExxonMobil, 2025). Growing demand in manufacturing is expected to be partially offset by nationwide voluntary and mandated electrification.

Relying on American oil and gas to meet growing demand makes sense for environmental outcomes, as American energy producers are far cleaner than those in other countries. The International Energy Agency's global methane tracker reports that "Russian natural gas production emits 30% more methane per unit of energy" than American producers (Nash et al., 2022).

> Fast Fact: American natural gas producers emit 30% less methane than Russian producers.

The Russian-Ukrainian conflict and the changing role of America in Venezuela are reshaping global energy markets. Despite expectations of stable (to slightly growing) demand in American markets, producers can still expect global demand to grow. American producers can meet that demand with cleaner and more efficient fuels than those offered by international competitors (Nash et al., 2022).

Policy Recommendations

Federal and state policies can help ensure that America's oil and gas industry is free to produce, transport, and refine the energy Americans (and the rest of the world) need.

Congress and state legislators should pass legislation providing liability protection against the amorphous, speculative claims being raised in thousands of climate cases. These cases target legal, life-saving products that have enabled the modern economy and resulted in significant reductions in human morbidity and mortality. These cases amount to fishing expeditions to extort money from the industry for its alleged role in causing climate damage (Hayes, 2024; Hayes, 2025; Bolema, 2025; Orrall, 2025).

ESG-focused funds, driven by decarbonization mandates and "green" tax credits, have caused a "capital flight" from refineries that produce essential fuels toward wasteful, expensive biofuels (Saucier, 2024; Marahrens, 2022). Congress should put an end to the weaponization of capital to help rebuild investment in American refining capacity (Faulkender, 2022).

- The Securities and Exchange Commission should fully repeal the currently stayed 2024 "Enhancement and Standardization of Climate-Related Disclosures for Investors" rules.
- State legislatures and federal agencies should bar the "Social Cost of Carbon" metric from rulemakings (Fisher, 2024).
- Congress should pass the SPEED Act to implement much-needed updates to the National Environmental Policy Act of 1969 (AFPI, 2025b).

Federal agencies should expedite permitting and minimize regulatory delays by streamlining the application of NEPA at the agency level to help ensure that essential energy projects can move forward (AFPI, 2025b; Hite & McPherron, 2025). Such actions should include:

- Setting limits on page and word counts for permit applications, as well as setting strict, enforceable time limits for agencies to render permit decisions.
- For deficiencies in permit applications, adopt a "fix-it-in-place" model rather than shutting down the project.
- Increasing the use of categorical exclusions, especially for upgrades, replacements, and maintenance to already-built refining capacity.
- Instruct federal agencies (and DOJ in litigation) that "significant effects" under NEPA means direct, domestic, reasonably foreseeable, and project-specific impacts—not theoretical or speculative "upstream" and "downstream" impacts.

Congress should permanently extend the protections allowed for restarting refineries in Administrator Zeldin's September 2025 "New Source Review Program 'Reactivation Policy'" memo (Zeldin, 2025).

EPA should reset the Ozone Standard to the pre-2015 level of 75 ppm.

Congress (not agencies) should have final responsibility for establishing more stringent NAAQS levels, and these decisions should be based on a 10-year review timeline.

The Path Forward

Global demand for oil and gas will remain strong over the next several decades. Pro-energy, America First policies encourage innovation and the development of new technologies such as fracking, which has allowed America to become energy independent, as it has increased oil production to 13.6 mmb/d and natural gas production to over 107 billion cubic feet per day in 2025. America First policies also allow domestic refiners to convert oil and natural gas into usable products such as gasoline, propane, chemicals, fertilizers, and plastics.

For too long, American energy policy has focused on increasingly dangerous net-zero mandates and decarbonization. Those policies imposed drastic restrictions on our use of reliable energy sources while forcing a transition to unreliable, expensive, and allegedly green sources. By leveraging energy abundance, innovation, and our natural resources, America can become even more prosperous, create good-paying careers, and reduce reliance on an often-unfriendly global energy market and on strategic competitors. American energy can fuel medical breakthroughs, expand agricultural productivity, and provide the power and jobs to lift billions out of poverty worldwide (AFPI, 2025a).

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