

An aerial photograph of a large offshore oil rig in the ocean. The rig is a complex of metal structures, including a tall derrick, various platforms, and a helipad. The rig is supported by several large, red, cylindrical legs. The ocean is dark blue, and the sky is overcast with grey clouds. In the background, another smaller rig is visible on the left, and a small boat is in the water. The overall scene is industrial and maritime.

1.

Energy Security

Reforms to Expand Domestic Natural Resource
Production and Provide Affordable, Reliable Energy

CAPITALIZING ON AMERICA'S ENERGY ABUNDANCE AND IMPROVING ENERGY SECURITY

Key Takeaways:

- The United States is rich in natural resources and American energy producers are global leaders in supplying families and businesses with affordable, reliable energy. Energy policy should allow price signals to guide energy investments to create a true, diversified, all-of-the-above approach to energy.
- Policies and regulations that restrict natural resource extraction and energy infrastructure will take away American jobs and hinder economic growth but are likely to have the unintended environmental consequence of increasing global pollution and greenhouse gas emissions.
- Increasing energy supplies, easing supply chain constraints and securing processed minerals will best be achieved by opening domestic and international markets to extraction, processing, and trade.

Russia's invasion of Ukraine was a wake up call for policymakers to remind them that energy affordability and security is indispensable for American families, the economy, and America's allies. Households and businesses need affordable, reliable power from stable, friendly suppliers.

At the same time, governments around the world are working to reduce the risks of climate change. Energy security goals, capitalizing on energy abundance, deploying affordable, dependable energy, and climate progress do not have to conflict with one another. In fact, if there is conflict, there is also a good chance the proposed policy will fail economically and environmentally. Energy policy pragmatism must recognize the need for natural resource extraction for fossil fuels, nuclear energy, renewables, and batteries. Achieving energy security will occur through the development of diverse, cost-competitive technologies that meet the needs of consumers.

The United States has a diverse resource portfolio for electricity generation. Sources include natural gas, coal, nuclear, wind, hydropower, solar, biomass, and geothermal.¹ Petroleum is the dominant source in the American transportation sector, but fully electric, plug-in hybrid, and hybrid vehicle purchases have noticeably grown the past few years. In the fourth quarter of 2021, EVs and hybrids made up 11 percent of all light-duty vehicles.² Biofuels, natural gas, and propane also serve as alternatives to gasoline and diesel.³

The key to a stable, affordable energy supply is to open access to America's abundance of natural resources. We must also allow markets and price signals to drive energy innovation. Price signals communicate information to investors and energy suppliers that there is a need for more of a certain resource, or that the suppliers should pivot to alternative technologies.

Businesses and investors also need regulatory certainty. Markets will deliver dependable energy while making environmental progress if policies and regulatory frameworks allow that. Opening access to resource development and to domestic and international markets and modernizing regulations will empower innovative companies to build cleaner and faster and provide American households with the affordable, secure energy choices they need.

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DOMESTIC OIL PRODUCTION HAS ECONOMIC, ENVIRONMENTAL, AND GEOPOLITICAL ADVANTAGES

While gas prices have fallen from their record highs of more than \$5 per gallon in June of 2022, prices at the pump remain uncomfortably high for many Americans. As of July 2023, the national average was \$3.54 per gallon,⁴ and prices may climb during the summer months. The price of a barrel of crude oil makes up the largest share (57.1 percent) of the price of a gallon of gasoline.⁵ Federal and state taxes (12.8 percent), distributing and marketing (12.4 percent) and refining costs and profits (17.7 percent) make up the rest.

For nearly half a century, Democrat and Republican presidents have pledged to make the United States energy independent and eliminate America's dependence on foreign oil.⁶ The reality is that oil is a globally traded commodity; therefore, U.S. households will incur higher prices if demand increases in China or there is a supply disruption in Saudi Arabia.

That is not to suggest, however, that Americans are helpless and at the complete mercy of state-owned oil producers like OPEC and Russia. U.S. producers have changed the global landscape for oil. The U.S. is now the largest oil and gas producer in the world, having increased production from just above 5 million barrels per day in 2007 to 11.8 million barrels per day in 2022.⁷ Dependence on OPEC for crude oil decreased from 85 percent of total petroleum imports in the 1970s to 11 percent in 2021.⁸ It is also worth noting that 59 percent of crude oil imports come from Canada (51 percent) and Mexico (8 percent). Increased domestic supplies acted as a market cushion to prevent prolonged price spikes from supply shocks caused either by natural disasters or disruptions in Middle Eastern production.⁹ The EIA projects that U.S. production will increase to a record 12.5 million barrels per day in 2023.¹⁰

The consumption of oil as a dependable fuel and critical input for fertilizers, industrial processes and plastics is expected to continue for the foreseeable future. Petroleum products, which account for roughly a quarter of total U.S. energy consumption, made up 88 percent of total transportation sector energy use in 2021.¹¹ The EIA projects energy demand to grow nearly 50 percent by 2050.¹² Although EIA projects the largest growth to come from renewables, the agency predicts that oil will still be the top energy source.¹³

Therefore, policymakers must reject policies that restrict domestic production and recognize the unintended environmental consequences of restricting domestic production. Samantha Gross of the Brookings Institute explains:

Cutting back domestic oil and gas production without an equally ambitious focus on demand will just increase U.S. imports, rather than reduce consumption. The United States could lose the economic advantages of its oil and gas production without a commensurate reduction in GHG emissions. In fact, such an outcome could actually increase global emissions, depending on how replacement fuels are produced and the emissions produced in transporting them to the United States. We must remember that climate change is a global problem and that the measure that matters is global GHG emissions. Any 'solution' that reduces U.S. emissions, but increases global emissions, is no solution at all.¹⁴

Policymakers should recognize America's global leadership in oil production is an economic, environmental, and geopolitical advantage. Working with our allies, American producers can be a global leader in supply and continue to reduce the industry's environmental and climate footprint. Domestic production can displace oil from dirtier producers and reduce the influence of political adversaries on the global market.

It is important to see that there is a difference between achieving independence from countries that are hostile to the U.S. and achieving complete energy self-sufficiency.¹⁵ Given the connectedness of global markets and the value consumers derive from

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comparative advantages, attempts to achieve self-sufficiency would be extremely costly and ineffective.¹⁶ Americans benefit through lower prices and increased economic activity when there is a more efficient global oil market. Moreover, a barrel of oil extracted in North Dakota is different from one extracted in Saudi Arabia.

Crude oil ranges from very light to very heavy depending on its density, and sweet to sour depending on its sulfur content. In addition to the regulations and rule of law in the country where production occurs, the environmental and climate impacts vary by different types of crude. A continual flow of imports and exports allows countries to match refining capabilities to the different types of crude that are available. As a result, open markets create economic and environmental efficiencies that are better for American consumers and the U.S. economy.

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POLICY RECOMMENDATIONS TO EXPAND OIL AND GAS PRODUCTION

To open access to markets, provide secure supplies, and ease the pain at the pump that is caused by poor policies, Congress and the administration should:

- **Approve the Keystone XL pipeline.** Building the pipeline would deliver up to 830,000 barrels of oil per day from Canada to Gulf Coast refineries. Canadian crude would likely displace heavier crudes from Russia, Venezuela, and the Middle East.
- **Implement a 50/50 revenue share for states for production in federal waters.** To encourage states to allow offshore exploration and production, Congress should apply the same 50/50 revenue sharing program that exists between the federal and state governments on federal lands. Gulf Coast states receive 37.5 percent for offshore oil and gas development.¹⁷ If states oversee the environmental review and permitting process, they should collect even more of the revenue.
- **Reform the Outer Continental Shelf Leasing Program by Modernizing the 5-year program.** Rather than having access to offshore federal waters determined by the political whims of different administrations, Congress should reform existing laws so the Department of Interior, working with affected states, can conduct lease sales when commercial interests exist.¹⁸ Conservation leasing opportunities should also exist for lease sales in federal waters.
- **Repeal the Renewable Fuel Standard (RFS).** A 2019 Government Accountability Office (GAO) study found the mandate was “associated with modest gas price increases in areas outside the Midwest” for “limited effect, if any, on greenhouse gas emissions.”¹⁹ Corn-based ethanol is an important oxygenate to make gasoline burn cleaner, but the use of it should be determined by market needs rather than government mandates.

LEVERAGING AMERICAN NATURAL RESOURCE ABUNDANCE TO EXPORT ENERGY FREEDOM

Russia's invasion of Ukraine was a reminder to Europeans that the continent is far too dependent on Russian natural gas. As European natural gas production declined, countries became increasingly reliant on natural gas imports.²⁰ In 2021, Europe imported about 80 percent of its natural gas consumption, roughly 40 percent of which came from Russia.²¹ After the invasion of Ukraine, the European Union pivoted its energy strategy to diversify away from Russia. In 2022, the continent was reliant on the U.S., Qatar, and Nigeria for nearly 26 percent of its natural gas imports. Russia supplied 24.6 percent of Europe's gas demand followed by Norway (25 percent), Algeria (11.6 percent), and others—such as Azerbaijan—at 13 percent.²²

Relative to Europe's entire natural gas consumption, the LNG market is still rather small, but LNG has grown in importance and helped to diversify Europe's natural gas choices. Displacing all Russian gas with other sources would be incredibly challenging

and it is unlikely LNG from other countries could displace the entirety of Russian gas any time soon. Nevertheless, Europe's expansion of LNG facilities provides a roadmap to significantly curtail Russia's ability to manipulate energy markets for political purposes, even if it comes at a marginal price premium.

Importantly, American LNG exports could also help reduce global greenhouse gas emissions. A report from the Citizens for Responsible Energy Solutions (CRES) Forum found that if Europe were to switch its supply of Russian LNG to American LNG, the continent would be able to reduce emissions by 72 million metric tons annually. Similarly, if China were to import liquified natural gas from America, instead of from Russia via pipeline, global emissions would decrease by as much as 65 million metric tons annually.²³

POLICY RECOMMENDATIONS TO EXPEDITE LNG EXPORTS

To improve opportunities to export more U.S. LNG, policymakers should:

- **Fast-track permitting for LNG exports.** If the U.S. does not have a free trade agreement (FTA) with the country receiving or sending the natural gas, the Department of Energy must make a public interest determination. The reality is LNG exports benefit Americans economically and geopolitically, and private companies should be able to sell natural gas to any buyer, as long as doing so does not compromise national security.
- **Refrain from assessing greenhouse gas impact from natural gas pipelines and LNG infrastructure.** Reducing greenhouse gas emissions and avoiding the costs of human-induced climate change are worthwhile goals. However, a single pipeline project or even all the natural gas pipelines in operation are not going to meaningfully affect the climate. Lengthier reviews will slow the development of a cleaner fuel source, increase opportunities for litigation, and create investment uncertainty. FERC's unanimous decision to reverse course on its greenhouse policies related to natural gas pipelines and facilities should remain in place.²⁴

CRITICAL MINERALS

Critical minerals are just that: *critical*. Non-fuel mineral commodities are essential for quality of life, technological progress, national security, and environmental ambitions. Nearly all the modern technologies Americans rely on, such as cell phones, laptops, appliances, and vehicles, require critical minerals. They are the foundation that empowers companies to build, manufacture and innovate. These minerals are necessary inputs to produce affordable energy, stable food supplies, defense technologies, and advancements in modern medicine. In short, critical minerals are the foundation for the products to keep Americans and people around the world safe, healthy, and happy. Whether it is wind, solar, hydro, nuclear, electric vehicles, battery storage, hydrogen, geothermal, or bioenergy, every one of these clean energy technologies requires a moderate or high amount of at least two critical minerals.²⁵ Several technologies, most notably wind, batteries, and hydrogen, have moderate to high needs for four or more critical minerals.

Russia's invasion of Ukraine was also a reminder that disruptions around the world can threaten supplies of minerals necessary for renewable, nuclear, and alternative energy technologies. As a major supplier of nickel, copper, and palladium (important inputs for batteries and semiconductors), sanctions on the Russian economy drove up prices for these elements.²⁶ In addition, the U.S. imports many of the rare earth elements (REE) necessary for many defense and commercial technologies that support daily life. REEs are critical to scaling up clean energy deployment such as solar cells, batteries, and wind turbine magnets, which are needed for global decarbonization. According to a recent report from the Citizens for Responsible Energy Solutions (CRES), the U.S. is completely import-dependent for 14 critical minerals and greater than 50 percent-dependent for 17 other mineral commodities.²⁷

Despite the name, rare earth elements are very abundant, including in the United States. However, most rare earth minerals are currently mined and processed in China.²⁸ According to the U.S. Geological Survey, China accounted for 80 percent of the rare earth minerals imported into the U.S. in 2020.²⁹ Policymakers warn about trading dependence on foreign oil for dependence on Chinese minerals; however, protectionism and taxpayer subsidies are ill-suited mechanisms to diversify the mining and processing of rare earths. Alternatively, allocating resources to research and development, opening access to the abundance of rare earths in the U.S., and trading with allies will reduce the ability of China to manipulate the rare earth market.

Realistically, it would be difficult for China to stop trading rare earth elements to the U.S. and the rest of the world. One reason is that U.S. companies are not solely importing the rare earth elements or oxides but products that contain them. The processed rare earths are sent to another country for assembly and exported to the U.S., so China would have to restrict rare earths trade to all those countries. In many cases, the company manufacturing the end product also resides in China.

Another data point worth mentioning is that China tried to cut off rare earths exports to Japan a decade ago, and the rare earths markets diversified. Prices increased, and mines opened in other countries including Australia, Brazil, Malaysia, and Vietnam. Canada's rare earth mining project opened in 2021 and is functioning without any tailings ponds, making it much more environmentally friendly.³⁰ Japan, through state backing, is investing to extract an abundance of rare earths off its coast.³¹ Mountain Pass mine in California re-opened, and it has a processing facility.³² Several other mining projects and processing facilities opened in the U.S., and many non-Chinese rare earth processing facilities opened around the world.³³

Thus far, the Biden administration has taken a frustratingly contradictory approach to procuring the minerals necessary for an energy transition. In January, the Department of Interior issued a withdrawal of 225,000 acres in Minnesota's Superior national forest that will ban mining in the area for the next two decades. This area has one of the largest underdeveloped deposits of copper, nickel, and cobalt in the world. Similarly, other mining projects in Arizona, Nevada, and Alaska have faced regulatory and permitting challenges.³⁴

Julie Padilla, the chief regulatory officer for Twin Metals Minnesota recently testified, "We can mine here better than anywhere else in the world. But the United States will not be able to do that under the current regulatory process that is unpredictable, subject to political manipulation with changing rules in each administration, and in conflict with the priorities of our nation."³⁵ If the U.S. and countries like Canada and Australia develop more resources, fewer minerals will need to come from countries that have lax environmental standards and use morally unconscionable labor practices.

Regrettably, rather than streamline the process while maintaining environmental and public health safety, the Biden administration added layers of bureaucracy through changes to the National Environmental Policy Act (NEPA).³⁶ Instead of reducing regulatory barriers, President Biden is using the Defense Production Act to procure several critical minerals.³⁷ Using the Defense Production Act not only sidesteps the necessary system reforms but worryingly sets a dangerous precedent to have the government usurp the role of the free, competitive markets. Eugene Gholz also warns that government subsidies would disrupt private investment because of the glut of rare earths in the market. He remarked, "US government investments using the Defense Production Act to create still more rare earth production capacity would add to this glut. The government investment could even drive the privately funded, already-operating US mine out of business again."³⁸

POLICY RECOMMENDATIONS TO EXPAND DOMESTIC MINERAL PRODUCTION

Easing supply chain constraints and securing processed minerals will best be achieved by opening up domestic and international markets to extraction, processing, and trade. Congress should liberalize the domestic mining market while maintaining necessary environmental safeguards. In fact, upstream mining and refining has been identified as a challenge to meet the objectives targeted in the infrastructure bill and the Biden administration's climate targets.³⁹ In addition to modernizing environmental reviews and permitting (see next section), policymakers should:

- **Prohibit both pre-emptive and retroactive vetoes under Section 404 of the Clean Water Act.**
- **Narrow government procurement and purchase of rare earth elements to Department of Defense and national security needs.**⁴⁰
- **Continue research and development into projects that can turn mine waste into useful products for clean energy and other technologies.**⁴¹
- **Provide research and development support for alternative mining technologies that would reduce environmental byproducts.**

The federal government should work with the private sector to maximize the efficiency of money allocated for research, development, and demonstration included in the Infrastructure Investment and Jobs Act. The Act includes National Science Foundation grants for basic research on domestic critical minerals mining and recycling, \$320 million for the U.S. Geological Survey for its Earth Mapping Resources Initiative, and \$140 million to build a Rare Earth Demonstration Facility.⁴²

Additionally, policymakers and companies should not reflexively close the door to deep seabed mining. The ocean floor contains nodules that are rich in minerals that can be used for batteries, renewable energy and defense technologies. The nodules can effectively be scooped up from the ocean floor and the deep ocean (down to 20,000 feet). There is no actual mining, extraction, or tailings associated with deep seabed mining, and studies have shown the climate and environmental impact is far smaller than the conventional mining of minerals.⁴³ While it is critical to understand the ecological and environmental risks and impacts of deep seabed mining, it is also important to evaluate the trade-offs between the various ways to extract and refine minerals. More collaboration among companies, coastal countries, and scientists should establish a transparent, science-based assessment of seabed mining.

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POLICY RECOMMENDATIONS TO REDUCE BARRIERS FOR ALL FORMS OF ENERGY

Several policy reforms would help with the development of oil, natural gas, critical minerals and energy infrastructure. Congress and the administration should:

- **Expedite permitting for natural resource extraction, energy projects and infrastructure.** The Lower Energy Costs Act of 2023 has several reforms that modernize the permitting process under NEPA, including limiting the page lengths of environmental assessments and environmental impact statements and reducing the statute of limitations for NEPA-related lawsuits to 120 days.
- **Open opportunities for state-led environmental reviews and permits.** Empowering states to conduct the environmental review and issue permits could create more efficient and localized reviews that better address the needs of local communities. State regulators could acquire technical expertise from the Federal Energy Regulatory Commission, the Bureau of Land Management, and the Environmental Protection Agency as necessary.
- **Repeal the Jones Act,** which mandates that oil (and other goods) shipped between two ports in the U.S. must be transported on a U.S.-built, U.S.-flagged vessel with a crew that is at least 75% American. Southern Methodist University professor James Coleman pointed out that refiners in the northeast U.S. paid triple the price to ship oil from Texas than from West Africa or Saudi Arabia. The Jones Act also distorts the transportation and delivery of LNG.
- **Eliminate steel and aluminum tariffs,** which drive up the cost of energy development and energy infrastructure.

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