

BACKGROUND

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Energy Exports Promote Prosperity and Bolster National Security

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Abstract

Expanding domestic energy production over the past few years has provided a welcome boost to the American economy. The federal government, however, has constrained the economic benefits by significantly limiting companies' ability to trade energy freely around the world. Opening energy markets would create more opportunities for Americans, promote economic prosperity at home and abroad, and improve political situations around the world.

With the wealth of U.S. natural resources and the recent growth in domestic energy production, the United States is in a position to export more energy. Free trade is imperative to a free society because it fosters economic growth and improves human well-being. Policymakers should treat energy like any other good or service that is traded freely around the world by allowing U.S. producers to export more energy.

Providing more energy choices to both producers and consumers will generate jobs, grow the economy, and bolster U.S. national security by increasing global energy supplies and reducing the ability of any one nation to use its control of energy resources to threaten U.S. interests. Congress and the Obama Administration should remove government-imposed barriers to energy exports.

America's Wealth of Resources

America has an abundance of natural resources, including sufficient energy reserves to provide Americans with affordable, reliable energy well into the future. With its plentiful reserves of coal, natural gas, and oil, the United States is already a global leader in energy

KEY POINTS

- Free trade is essential to increasing prosperity and improving human welfare. When markets are open to more producers and consumers, competition provides people with more choices and better products at lower prices, benefitting everyone involved.
- The United States has increased coal exports substantially over the past six years, and significant increases in domestic oil and natural gas production have producers seeking to export their products to foreign markets.
- Allowing energy exports would provide a huge boon to the American economy, creating jobs, growing the economy, and strengthening relationships with global trading partners.
- Free trade in energy bolsters national security by increasing supply diversity, reducing the effects of supply shocks, and increasing supplies that are readily available for national security needs.

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production and has the potential to be a major supplier to the rest of the world.

Coal. Coal generates nearly 40 percent of America's electricity generation. Just 1 million tons of coal could yield enough energy to power 190,000 homes annually. With more than 480 billion short tons of coal recoverable with today's technology, the United States can provide electricity for over 500 years at current consumption rates.

Natural Gas. Technological advancements have significantly increased the amount of recoverable natural gas in the United States. With more than 2,200 trillion cubic feet of recoverable natural gas, the U.S. has enough natural gas to meet America's current consumption needs for nearly a century.

Oil. Nearly 1.3 trillion barrels of technically recoverable oil lie beneath U.S. soil and off America's coasts—enough to fuel more than 90 million cars and nearly 3.5 million homes for more than 50 years.¹ America's technically recoverable resources represent only a fraction of the total oil reserves, which amount to more than 3.7 trillion barrels.²

Open Markets Handle Abundance and Scarcity Better

Highlighting the vast quantities of energy available in the U.S. helps to put into context just how resource-rich America is, but these numbers should not be taken out of context. Specifically, the notion that these resources are finite begets cries of scarcity.³

For instance, in a 1977 speech, President Jimmy Carter said:

The world has not prepared for the future. During the 1950s, people used twice as much oil as during the 1940s. During the 1960s, we used twice as much as during the 1950s. And in each of

those decades, more oil was consumed than in all of mankind's previous history. World consumption of oil is still going up. If it were possible to keep it rising during the 1970s and 1980s by 5 percent a year as it has in the past, we could use up all the proven reserves of oil in the entire world by the end of the next decade.⁴

When President Carter made that statement, proven world oil reserves were roughly 645 billion barrels.

Even a 2008 report from Royal Dutch Shell predicted "the end of easy oil," saying that the "idea that the world's supplies of oil have either peaked or will soon start declining has suddenly gained new respectability."⁵ When the Shell report came out, reserves totaled more than 1.2 trillion barrels.

Today proven reserves exceed 1.5 trillion barrels.⁶ Even as the world continues to consume more oil than in previous years, innovative technologies have helped to discover and extract more crude oil. In recent years, improved information, technology, and advancements in horizontal drilling and hydraulic fracturing have led to extraction of new reserves, tapping into areas where oil and gas were previously thought to be not present, uneconomical to extract, or technologically unrecoverable.

Regardless of resource abundance or scarcity, price signals and the desire for profits drive innovation, exploration, discovery, and development. Whether for conventional fuels or for alternative energy sources, open, competitive markets are the best mechanism to supply Americans with affordable, reliable energy. Increasing demand for energy and resource depletion will drive competition and investment in new technologies, turning uneconomical resources into viable ones. Given the different uses of resources and changing demands, future

1. Energy Tomorrow, "Undiscovered Technically Recoverable Resources," <http://energytomorrow.org/energy-101/energy-demands/undiscovered-technically-recoverable-resources> (accessed July 9, 2014).
2. Institute for Energy Research, "North American Energy Inventory," December 2011, <http://www.energyforamerica.org/wp-content/uploads/2012/06/Energy-InventoryFINAL.pdf> (accessed July 9, 2014).
3. The Heritage Foundation, *Environmental Conservation: Eight Principles of the American Conservation Ethic*, 2012, <http://www.heritage.org/research/projects/environmental-conservation>.
4. Jimmy Carter, "Proposed Energy Policy," televised speech, April 18, 1977, <http://www.pbs.org/wgbh/americanexperience/features/primary-resources/carter-energy/> (accessed June 27, 2014).
5. ABC (Australia), "Oil Scarcity Has 'Snuck Up on Us', Expert Says," January 30, 2008, <http://www.abc.net.au/news/2008-01-30/oil-scarcity-has-snuck-up-on-us-expert-says/1027260> (accessed June 27, 2014).
6. U.S. Energy Information Administration, International Energy Statistics, Proved Reserves of Crude Oil, <http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=5&pid=57&aid=6&cid=regions,&syid=2012&eyid=2012&unit=BB> (accessed June 30, 2014).

energy markets are entirely too complex to predict. However, price signals in an open market will drive investment and reward risk-taking and entrepreneurial activity.

Policymakers use the threat of resource scarcity to promote poor policy decisions that often serve special interests, such as mandating the use of ethanol or preventing exports. Government attempts to distort the energy market with subsidies, centrally planned mandates, and closed markets have failed time and again, leaving Americans worse off.

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The Benefits of Free Trade and Private Property

Free trade is a fundamental component in creating prosperity and promoting human well-being. When markets are open to more producers and consumers, competition provides people with more choices and better products at lower prices. Free trade allows Americans to buy foreign products that companies in other countries make more efficiently. Importantly, relying on other countries' ability to specialize in making certain products creates opportunities for American labor and capital to become more productive. Companies in foreign countries that specialize in making a product at a lower cost create opportunities for Americans to import it and thus pay less for it. Further, when markets are open to exports, opportunities grow, increasing the potential for more wealth, investment, and jobs.

Opening markets to both imports and exports fosters innovation as companies face more competition and meet challenges to retain or expand

their market share. The result is innovative ideas, higher-quality products at competitive prices, and an improving standard of living. Trading goods and services freely around the world is largely responsible for lifting hundreds of millions of people out of poverty. Whether by reducing hunger, improving the environment, or generally growing the global economy, free trade raises the tide for all boats, increasing prosperity and human welfare for all.⁷

As with many other countries, the United States benefits from free trade because of strong private property rights. When individuals produce something, it is their property, and they should be able to do whatever they want with their property as long as it poses no threat to national security and does not violate the law. Unlike in many countries, individuals in the U.S. have largely owned and been able to produce America's natural resources, which is a primary reason why the U.S. is a global energy leader.⁸ Individuals extract and sell the energy, and the government should allow them to explore all options to sell their product. Rather than constrain opportunities through arbitrary laws and regulations, policymakers should pursue free-market policies to expand opportunities and increase the number of potential buyers.

Economic Growth and Job Creation

The United States has substantially increased coal exports over the past six years, and significant increases in domestic production of oil and natural gas have producers seeking to export their products to foreign markets. Expanded exports could provide a huge boon to the American economy, providing jobs and increasing economic welfare broadly. Providing other countries with cheaper energy would not only lower the prices of products that the U.S. imports because the businesses could make the products more cheaply, but also promote economic development in those countries, enabling them to import more American goods.

Coal. The United States exported more than 117 million short tons of coal in 2013, down from 125 million short tons from 2012, but more than double the 55 million short tons exported in 2007.⁹ Several

7. Terry Miller, Anthony B. Kim, and Kim R. Holmes, *2014 Index of Economic Freedom* (Washington, DC: The Heritage Foundation and Dow Jones & Company, Inc., 2014), <http://www.heritage.org/index/>.

8. Resources do exist on federally owned land, but the private sector leases the land and pays for the right to extract and sell the resources.

9. U.S. Energy Information Administration, "Quarterly Coal Report, January–March 2014," June 2014, pp. 11–12, Table 7, <http://www.eia.gov/coal/production/quarterly/pdf/t7p01p1.pdf> (accessed July 9, 2014).

factors account for this. International markets, primarily Europe and Asia, are experiencing increased demand for affordable electricity and metallurgical coal, which is used in iron and steel production.¹⁰ Further, inexpensive natural gas, large subsidies for renewable energy, and an overburdened regulatory environment for coal have reduced opportunities for domestic use, leading producers to seek opportunities abroad. As a result, according to a 2013 Ernst & Young study commissioned by the National Mining Association, coal exports contributed more than 140,000 jobs and \$16.6 billion in gross domestic product (GDP) for 2011.¹¹ Not only do the coal producers stand to benefit, but downstream transportation and U.S. port activities would experience increased workloads. Coal-producing states that send a relatively high percentage of their coal production overseas include West Virginia, Pennsylvania, Montana, Virginia, Alabama, and Alaska. The top five port states benefitting from coal exports are Virginia, Louisiana, Maryland, Alabama, and Washington.¹²

Natural Gas. Only a few years ago, U.S. companies were planning to import natural gas, but the shale gas revolution dramatically changed their plans. Technological advancements in directional drilling and hydraulic fracturing have led to an abundance of natural gas production in the United States, fundamentally changing the energy landscape. The result has been more jobs, economic growth, and consistently low domestic natural gas prices in what has been a historically volatile market. Many producers are seeking to expand to foreign markets where prices are much higher. The first export terminal receiving the necessary approval from both the Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC) will likely become operational by the end of 2015.

Exporting liquefied natural gas (LNG) would tremendously benefit the American economy by expanding market opportunities. Given the disparity in prices between domestic and foreign markets (e.g., Europe, Asia, and Latin America), opportunities should prove to be plentiful even with the costs of transport tankers and liquefaction plants and the competition from other exporting countries. NERA Consulting, which conducted an economic analysis of LNG exports for the DOE in 2012, reiterated its positive economic findings in an updated study.¹³ The benefits would include tens of billions of dollars in export revenue, tens of billions of dollars in increased GDP, and tens of thousands of new jobs.¹⁴ Notably, the study found the higher the volume of exports, the greater the economic benefits would be.

Opening markets to crude oil exports would save American consumers an estimated \$5.8 billion over 20 years, increase U.S. GDP by more than \$38 billion, and add more than 300,000 jobs by 2020.

Oil. As with natural gas, crude oil production in the United States has skyrocketed in the past six years, largely due to technological advances in horizontal drilling and hydraulic fracturing, commonly referred to as fracking. As a result, crude oil production has increased by 99.5 percent since 2008, when production reached its lowest point since 1943.¹⁵ Crude oil production reached 8.2 million barrels per day in March 2014, and total production in 2013 was the highest since 1989.¹⁶ While U.S. law largely bans

10. Yemi Assefa et al., "Coal: A Key Player in Expanded U.S. Energy Exports," U.S. Bureau of Labor Statistics, *Beyond the Numbers*, February 2013, <http://www.bls.gov/opub/btn/volume-2/pdf/coal-a-key-player-in-expanded-us-energy-exports.pdf> (accessed July 9, 2014).

11. Ernst & Young, "U.S. Coal Exports: National and State Economic Contributions," National Mining Association, May 2013, http://www.nma.org/pdf/coal_export_report.pdf (accessed July 9, 2014).

12. Ibid.

13. NERA prepared the updated study for Cheniere Energy.

14. Robert Baron et al. "Updated Macroeconomic Impacts of LNG Exports from the United States," Cheniere Energy, March 24, 2014, http://www.nera.com/nera-files/PUB_LNG_Update_0214_FINAL.pdf (accessed July 9, 2014).

15. U.S. Energy Information Administration, "U.S. Field Production of Crude Oil," March 28, 2014, <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPUS2&f=M> (accessed June 27, 2014).

16. U.S. Energy Information Administration, "U.S. Crude Oil Production in 2013 Reaches Highest Level Since 1989," *This Week in Petroleum*, March 12, 2014, <http://www.eia.gov/oog/info/twip/twiparch/2014/140312/twipprint.html> (accessed June 27, 2014).

crude oil exports, it allows some exceptions.¹⁷ Companies have taken full advantage of those opportunities, increasing exports to 268,000 barrels per day, the highest in 15 years.¹⁸ One primary concern among skeptics and opponents of lifting the crude export ban is how increased oil exports might affect domestic gas prices. Yet several studies project that lifting the ban would likely decrease gas prices in the United States and globally by creating a more efficient distribution system for processing oil.¹⁹ An ICF International study prepared for the American Petroleum Institute concludes that opening markets to crude exports would save American consumers an estimated \$5.8 billion over 20 years, increase U.S. GDP by more than \$38 billion, and add more than 300,000 jobs by 2020.²⁰ A recent IHS study projects even higher benefits, finding that removing the ban would lower gasoline prices by 8 cents per gallon, saving motorists \$265 billion over 15 years. IHS projects that the economic activity resulting from increased crude exports would create an average of 394,000 additional jobs from 2016 to 2030, peaking at nearly 1 million jobs in 2018.²¹

Bolstering National Security

New opportunities to export energy have raised national security concerns. For instance, opponents of crude oil exports argue that natural resources are an important national security tool and that increasing U.S. exports will reduce U.S. energy security, reduce energy independence, and increase the need to import oil from hostile and unstable nations.²² The reality, however, is that free trade in energy bolsters national security by increasing supply diversity, reducing the effects of supply shocks and increasing the energy available for national security needs.

Supply Diversity. The idea that America needs self-sufficiency in energy production to achieve energy security or energy independence is mistaken. Oil, for example, is a global commodity. Whether as a net importer or net exporter, the U.S. cannot inoculate Americans from price volatility any more than U.S. self-sufficiency in food production can prevent supply problems in other parts of the world from affecting domestic U.S. food prices. Nor should policies seek to inoculate consumers from natural variations in prices. However, increased energy supplies on the global market will help to moderate price volatility from supply disruptions.

Removing restrictions on crude oil exports would improve national security and geopolitics around the world by reducing any one nation's ability to manipulate energy supplies for political and economic influence. The recent crisis in Crimea between Ukraine and Russia demonstrates how liberalizing global energy markets could be an effective geopolitical tool. Much of Russia's power in the region derives from its control of energy supplies and distribution systems.

Because approving, engineering, permitting, and building LNG facilities takes several years, lifting export restrictions might not directly influence the Ukraine crisis in the near term, but it would send an important signal to Russia and the rest of the world that any country that derives power from controlling energy interests will have less power in the future.

Opening markets would provide a diversity of suppliers and greater energy supplies for the global market. This would likely reduce prices and certainly offer more choice to countries such as Ukraine in the near future. Ultimately, providing that choice would diminish Russian power. Establishing free-

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17. Nicolas D. Loris, "Time to Lift the Ban on Crude Oil Exports," Heritage Foundation *Backgrounder* No. 2910, May 15, 2014, <http://www.heritage.org/research/reports/2014/05/time-to-lift-the-ban-on-crude-oil-exports>.
 18. U.S. Energy Information Administration, "U.S. Crude Exports in April Rise to Highest Level in 15 Years," *Today in Energy*, June 16, 2014, <http://www.eia.gov/todayinenergy/detail.cfm?id=16711> (accessed June 27, 2014).
 19. Loris, "Time to Lift the Ban on Crude Oil Exports."
 20. ICF International, "The Impacts of U.S. Crude Oil Exports on Domestic Crude Production, GDP, Employment, Trade, and Consumer Costs," American Petroleum Institute, March 31, 2014, <http://www.api.org/news-and-media/news/newsitems/2014/mar-2014/-/media/Files/Policy/LNG-Exports/LNG-primer/API-Crude-Exports-Study-by-ICF-3-31-2014.pdf> (accessed April 21, 2014).
 21. IHS, "U.S. Crude Oil Export Decision," May 29, 2014, <http://www.ihs.com/info/0514/crude-oil.aspx?ocid=coe:pressrls:01> (accessed July 9, 2014).
 22. United Steelworkers, "USW Opposes Export of U.S. Crude Oil; Cites Resulting Job Loss, Other Factors," March 10, 2014, <http://www.usw.org/news/media-center/releases/2014/usw-opposes-export-of-u-s-crude-oil-cites-resulting-job-loss-other-factors> (accessed June 27, 2014).
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market reforms now and increasing energy supplies would help to prevent future incidents and price shocks, not just in Ukraine, but around the world.

Available Supplies. More market opportunities for companies will increase the energy production available to the Department of Defense. Without export potential, the United States may experience less domestic supply. In fact, the current price of natural gas may be too low to sustain the current rate of development, as producers are flaring gas and in some cases not even drilling new dry gas²³ wells. Furthermore, if the domestic refining market is saturated, oil companies will stall or shut-in production.²⁴ In some areas of the country, this is already occurring. By discouraging production, an artificially restricted market decreases global supplies of oil and keeps prices higher than they otherwise would be.

Certainly, countless other factors contribute to energy prices and consequent investment decisions, but an open market is critical. More open energy markets will allow market incentives to increase and sustain energy production, providing the U.S. with access to more energy production in more stable markets, making more energy available for national defense when needed.

Policy Solutions

Members of Congress and the Administration should take a number of steps to remove artificial barriers to energy exports:

- **Lift natural gas export barriers.** Companies must obtain approval from both FERC and the DOE before exporting natural gas. A facility is automatically authorized if the recipient country has a free trade agreement (FTA) with the U.S. In the absence of such an agreement, the DOE can arbitrarily deny a permit if it believes the volume of natural gas exports is not in the public's interest. The decision to export natural gas should be a business decision, not a political one. The

U.S. trades regularly with a number of non-FTA countries. Natural gas should be no different and should be treated like any other globally traded good.

- **Remove the crude oil export ban.** Even though crude oil exports have increased, U.S. crude exports are still significantly limited. The Department of Commerce should change the definition of allowable exports, and the President should determine that exports are in the national interest. Ultimately, Congress should end the ban.
- **Prevent threats to coal exports.** Coal export terminals should go through the proper environmental review and permitting stage, but opponents to coal production want the Army Corps of Engineers to consider a cumulative, programmatic environmental impact statement (EIS). This comprehensive review would assess the environmental impacts and greenhouse gas emissions not only from the actual terminal, but also from the mining, rail transportation to the terminal, and end use of the coal. Adding these extra layers of regulatory review would create more fodder for groups who want the coal to stay in the ground, setting a dangerous precedent for exports of goods and services that environmental activists feel have too large of an environmental footprint.²⁵ Congress should prevent cumulative environmental impact statements for coal exports.

Conclusion

Expanding market opportunities for energy exports will not just benefit energy companies. By opening the door to establishing more efficient global oil markets, all Americans will reap the benefits of lower prices, more jobs, and a stronger economy. Freely trading energy will not only increase prosperity around the world, but also bolster U.S. national security by diversifying supplies in the global market.

23. Dry natural gas is largely free of condensable heavier hydrocarbons.

24. Shutting-in refers to producing oil or gas at less than capacity.

25. Ross Eisenberg, "U.S. Energy Abundance: Regulatory, Market, and Legal Barriers to Export," testimony before the Subcommittee on Energy and Power, Committee on Energy and Commerce, U.S. House of Representatives, June 18, 2013, <http://democrats.energycommerce.house.gov/sites/default/files/documents/Testimony-Eisenberg-EP-Energy-Abundance-Regulatory-Markets-Legal-Barriers-2013-6-18.pdf> (accessed June 27, 2014).

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