The Heritage Foundation

BACKGROUNDER

No. 2966 | OCTOBER 31, 2014

Free Markets Supply Affordable Energy and a Clean Environment

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Abstract

America is in the midst of an energy boom and the United States is reaping tremendous economic benefits because of it. Businesses are hiring, incomes are growing, and the economy is stronger than it would otherwise be. In spite of all the positive developments, America's energy sector remains full of inefficiencies because of government intervention. The Heritage Foundation's Herbert and Joyce Morgan Fellow Nicolas Loris explains the problems with the federal government's involvement in energy production and details how and why free markets supply affordable, reliable energy and a clean, healthy environment.

Key Points

- The past few years have been a case study of what works and does not work in U.S. energy policy.
- When the free market operates, resource extraction and production expands greatly, innovative technologies generate new opportunities, and job creation and the economy grow robustly.
- When the free market is crippled by intervention, the federal government wastes taxpayer dollars, delays or blocks promising energy development, and shifts resources to politically preferred sectors of the economy.
- Economic growth and environmental protection are not mutually exclusive. A growing economy enables people to protect and care for the environment.
- America has experienced economic and environmental success through the principles and policies derived from individual liberty and sensible state and local regulations.
- Congress should pursue policies that remove all energy subsidies, open access to domestic and foreign markets, and reduce the onerous regulatory burden on all energy companies.

Energy production has been one bright spot in the economy over the past few years, driving job creation and creating opportunities for Americans across the country. Increased energy supplies have saved consumers money directly on their energy bills and indirectly through lower prices for goods and services. The energy boom has also revitalized parts of the country where businesses have taken advantage of abundant, affordable natural gas.

Not all of the news is positive, however. Despite the successes, America's energy policy is fraught with problems. The federal government has delayed projects, restricted access, and overregulated industries at great cost. Furthermore, Washington provides taxpayer-funded subsidies, imposes mandates, and rewards political connectedness and special interests over economic viability.

A common thread runs through the reforms needed to create more opportunity and remove favoritism in the energy sector: get government out of the way. A free energy market would drive innovation and provide the affordable, reliable energy that Ameri-

This paper, in its entirety, can be found at **http://report.heritage.org/bg2966**

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can families and businesses need. Further, policies rooted in the free market would not only protect the environment, but also deliver the means to promote a cleaner environment.

Economic Successes from Energy Production

Energy production, specifically shale oil and shale gas on private lands in the United States, has been one of the greatest success stories in recent years. Households save money through lower energy bills and cheaper goods when businesses compete and pass cost savings along to consumers. Yale economists calculated that the consumer surplus—the savings gained from the reduction in the price of natural gas—exceeds $100 billion after accounting for residential, industrial, commercial, and utility use.[1] In effect, the shale gas boom is putting more money back in families' wallets. Economic consulting firm IHS estimates that the average household saved $1,200 in 2012 through lower energy costs and increased income, and those savings will nearly triple over the next decade.[2] Lower natural gas prices are also encouraging more business investment and attracting businesses to locate in the U.S.

The economic benefits from the shale oil and gas boom go far beyond household savings. Directional drilling and hydraulic fracturing (fracking) supported more than 2.1 million jobs in 2012.[3] The oil and gas boom has also created work for geologists, engineers, rig workers, truck drivers, and pipe welders. That has increased demand for restaurants, repair shops, hardware stores, hotels, box stores, and Laundromats in those areas. In Williston, North Dakota, home to one of the country's most productive shale resource deposits, McDonald's is offering signing bonuses and Wal-Mart is hiring cashiers for $17.40 an hour, almost 2.5 times the minimum wage.[4]

Energy production has been a catalyst of economic revitalization across the country, rejuvenating old steel towns and making America an attractive place to locate new, energy-intensive businesses. With abundant shale oil and gas deposits across the country, IHS projects that the U.S. energy sector will grow stronger and that energy-related employment will increase to 3.9 million jobs by 2025 with over 550,000 in the manufacturing sector.[5] Smart drilling technologies and the resulting energy production generated $284 billion in gross domestic product (GDP) in 2012, and IHS estimates that will jump to $533 billion by 2025.[6]

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Effective Environmental Protection from the Free Market

Economic growth and environmental protection are not mutually exclusive, despite the beliefs of many opposed to energy development. In fact, economic growth provides the means to protect and care for the environment, and affordable energy is a vital contributor to that growth. Smart drilling technologies have enjoyed economic and environmental success across the country for many reasons, but two common themes stand out: strong private property rights and sensible state and local regulations.

The United States is reaping the economic benefits from fracking because of strong private property

1. Robert M. Ames et al., "The Arithmetic of Shale Gas," Yale Graduates Energy Group, June 15, 2012, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2085027 (accessed September 17, 2014).
2. IHS, *America's New Energy Future: The Unconventional Oil and Natural Gas Revolution and the U.S. Economy*, Vol. 3, *A Manufacturing Renaissance*, September 2013.
3. Ibid.
4. Mark J. Perry, "A Report from the Bakken Oil Fields, Where the Jobless Rate is 0.9% and Walmart Is Paying 2.4 Times the Minimum Wage," American Enterprise Institute, June 9, 2014, http://www.aei-ideas.org/2014/06/a-report-from-the-bakken-oil-fields-where-the-jobless-rate-is-0-9-and-walmart-is-paying-2-4-times-the-minimum-wage/ (accessed September 17, 2014).
5. IHS, *America's New Energy Future*.
6. Ibid.

rights. When individuals own and produce something, it is their property, and they should be able to use their property however they want as long as it poses no threat to national security and does not violate the law. Individuals who own mineral rights have an incentive to work with companies to extract those resources for profit in a manner that protects their backyard and restores it in a way best tailored to that land owner.

In fracking, after a company finishes drilling the well (approximately two to four weeks), it then fracks the rock formation at high pressures out to several hundred feet away from the gas well. This process takes three to five days, at which point the well will produce natural gas for 20 to 50 years, or longer. After the drilling, the company restores the land with soil and new vegetation, leaving only the wellhead and collection tanks.

Enforcing property rights is critically important for both energy production and environmental protection. Moreover, a free-market, property-rights approach will improve the environmental quality of the land, water, air, and wildlife in the U.S. by creating the proper incentives to care for the land and punish polluters who violate property rights.[7] Identifying gaps where property rights are not well-defined or poorly enforced and where institutions and laws create disincentives for conservation and improving efficiency is a much more effective tool of environmental stewardship.

The state regulatory regimes have also contributed to the success of hydraulic fracturing, while maintaining a strong environmental record. State regulators and private land owners have local and specialized knowledge as well as proper incentives to promote economic growth while protecting their environment. They have the most to gain by properly managing natural resources and economic activity and the most to lose from mismanagement.[8]

Each state that allows fracturing has a comprehensive regulation to help ensure that oil and gas companies operate safely and in an environmentally sensible manner. They administer fines and impose other penalties to correct any wrongdoing. In November 2011, former Environmental Protection Agency (EPA) Administrator Lisa Jackson acknowledged: "States are stepping up and doing a good job. It does not have to be EPA that regulates the 10,000 wells that might go in."[9]

However, this is not a recent occurrence. States have effectively regulated oil and gas production and hydraulic fracturing for decades. Used in over one million wells in the United States for more than 60 years, fracking has successfully retrieved more than 7 billion barrels of oil and 600 trillion cubic feet of natural gas.[10]

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Favoritism in the Energy Sector

While the energy sector and supporting industries have bucked the economic trend over the past few years, the news is not all good. Over the years, federal policies have blocked access to opportunities, unnecessarily delayed projects, mandated expensive energy production, restricted choice, and given handouts to politically connected energy technologies. Politicians tout these programs as means to usher in new technologies that will provide jobs and stimulate the economy. The reality, however, is that these policies play favorites by allocating special benefits to the well-connected, rather than creating a playing field that provides opportunity for all to compete.

Perhaps most perverse is that these subsidies significantly obstruct the long-term success and via-

7. Terry L. Anderson and Gary D. Libecap, *Environmental Markets: A Property Rights Approach* (New York: Cambridge University Press, 2014).
8. Romina Boccia, Jack Spencer, and Robert Gordon Jr., "Environmental Conservation Based on Individual Liberty and Economic Freedom," Heritage Foundation *Backgrounder* No. 2758, January 14, 2013, http://www.heritage.org/research/reports/2013/01/environmental-conservation-based-on-individual-liberty-and-economic-freedom.
9. Rachel Maddow, "Interview with Lisa Jackson," *The Rachel Maddow Show*, video file, November 22, 2011, http://video.msnbc.msn.com/the-rachel-maddow-show/45395747 (accessed September 17, 2014).
10. Institute for Energy Research, "Hydraulic Fracturing—Is It Safe?" May 3, 2011, http://www.instituteforenergyresearch.org/2011/05/03/hydraulic-fracturing-is-it-safe/ (accessed September 17, 2014).

bility of the technologies and energy sources they intend to promote. Instead of relying on a process that rewards competition, taxpayer subsidies prevent a company from truly understanding the price point at which the technology will be economically viable. When the government plays favorites, it traps valuable resources in unproductive places.

Favoritism in the energy sector comes in many forms, and many different special interests benefit from those policies. For instance, the Renewable Fuel Standard mandates require refiners to blend billions of gallons of ethanol into fuel each year. Most of the ethanol comes from corn. This artificially raises the cost for drivers because ethanol is less efficient and ultimately costs more. In addition, ethanol has proven to be harmful to smaller engines.[11] Additionally, the mandate drives up food prices, not just for American families but also around the world because corn is a staple food in many countries as well as a staple feed for livestock.[12] As a result, many food associations and anti-hunger organizations oppose the mandate.[13]

Further, although environmental organizations initially supported the mandate to reduce oil use and greenhouse gas emissions, many now argue that the ethanol mandate is poor environmental policy.[14] According to a Rice University study, biofuel production is highly carbon-intensive after accounting for land-use conversion; the use of fertilizers, insecticides, and pesticides; and the conventional fuels used for production and distribution.[15] To meet the growing demand for ethanol, farmers must plow more land and plant more corn, which means less area for trees and increased release of carbon dioxide stored in trees, plants, and soil.[16] The EPA also acknowledges that increased soybean production as a result of the mandate can adversely affect water quality, ecosystems, and habitats and increase criterion pollutants, such as sulfur dioxide and nitrous oxide.[17]

One would think that a diverse coalition including the Clean Air Task Force, the National Chicken Council, the National Turkey Federation, the Milk Producers Council, Oxfam America, Taxpayers for Common Sense, Friends of the Earth, and dozens of other organizations as well as American families adversely affected as taxpayers and consumers would be influential enough to repeal the mandate.[18] Yet the mandate is set to increase to 36 billion gallons per year by 2022 because special interests, mostly in the Midwest, benefit from the policy.[19] The policy benefits a select few and creates a vicious loop of politicians, lobbyists, and special interests who protect the mandate.

Regarding corn-based ethanol, former Vice President Al Gore observed:

> It's hard once such a program is put in place to deal with the lobbies that keep it going. One of the reasons I made that mistake is that I paid particular attention to the farmers in my home state of Tennessee, and I had a certain fondness for the farmers in the state of Iowa because I was about to run for President.[20]

11. Ed Perratore, "Gas with Ethanol Can Make Small Engines Fail," *Consumer Reports*, March 22, 2013, http://www.consumerreports.org/cro/news/2013/03/gas-with-ethanol-can-make-small-engines-fail/index.htm (accessed October 9, 2014).
12. David W. Kreutzer, "Renewable Fuel Standard, Ethanol Use, and Corn Prices," Heritage Foundation *Backgrounder* No. 2727, September 17, 2012, http://www.heritage.org/research/reports/2012/09/the-renewable-fuel-standard-ethanol-use-and-corn-prices.
13. Action Aid USA et al., open letter to Members of the House Energy and Commerce Committee, October 7, 2013, https://ntuf.memberclicks.net/assets/rfs%20reform%20coalition%20letter%20to%20ec%202013%2010-7-13%20final%2044%20signatures.pdf (accessed September 26, 2014).
14. James A. Baker III Institute for Public Policy of Rice University, "Fundamentals of a Sustainable U.S. Biofuels Policy," *Baker Institute Policy Report* No. 43, January 2010, http://bakerinstitute.org/research/baker-institute-policy-report-43-fundamentals-of-a-sustainable-us-biofuels-policy/ (accessed September 26, 2014).
15. Ibid.
16. Joseph Fargione et al., "Land Clearing and the Biofuel Carbon Debt," *Science*, Vol. 319, No. 5867 (February 2008), pp. 1235–1238.
17. U.S. Environmental Protection Agency, "Regulation of Fuels and Fuel Additives: Identification of Additional Qualifying Renewable Fuel Pathways Under the Renewable Fuel Standard Program, *Federal Register*, Vol. 78, No. 43 (March 5, 2013), pp. 14190–14217.
18. Action Aid USA et al., open letter to Members of the House Energy and Commerce Committee.
19. Ken G. Glozer, *Corn Ethanol: Who Pays? Who Benefits?* (Stanford, CA: Hoover Institution Press, 2011).
20. "Al Gore's Ethanol Epiphany," *The Wall Street Journal*, November 27, 2010, http://online.wsj.com/article/SB10001424052748703572404575634753486416076.html (accessed September 17, 2014).

Vice President Gore identified the problem with special interest politicking. Politicians will support a bad policy that concentrates wealth in a select few who live in their districts or states. Even though the policy harms other American consumers and taxpayers, politicians claim they created jobs and economic growth in their states. If those politicians recognize the policy is bad for America, it is still in their perceived self-interest to support the policy to maintain support for the next election. In fact, Vice President Gore could speak the truth about corn ethanol because he had less incentive to please that particular group of constituents.

For every energy policy that is not based on free-market principles, a special interest stands to gain.

Therein lies the problem with favoritism in politics. Bad policies remain or are expanded because perceived political importance trumps economic viability and good policy. When the government dictates how private-sector resources are spent, the industries that stand to benefit from or be harmed by those policy decisions will increase their lobbying for government handouts and to prevent their competitors from receiving the handout. This tendency of the political process to continually pick winners and losers was identified by economist Gordon Tullock and later defined by economist Anne Krueger as "rent seeking."[21]

While the ethanol mandate provides a useful example of how rent seeking works, rent seeking is certainly not unique to ethanol. Political favoritism in the energy sphere exists for all energy sources and comes in many different forms. For instance, targeted tax credits for renewables, nuclear, coal, oil, and alternative transportation technologies divert resources to the special interests that Congress wants to succeed and moves the decision-making process away from the marketplace.[22] Loan guarantees and taxpayer-funded grants do the same.

Furthermore, the Department of Energy has overstepped its role by spending billions of dollars researching technologies to reduce carbon dioxide emissions, including energy efficiency technologies, renewable energy sources, carbon capture and sequestration, clean coal technologies, nuclear energy, and alternative-energy vehicles. These efficiency mandates benefit select companies. Chemical companies want to restrict natural gas exports for fear that the price will increase and hurt their businesses, but they have no qualms about exporting their own products. Big businesses may welcome sweeping environmental regulation because it adversely affects small businesses. And the list goes on.

For every energy policy that is not based on free-market principles, a special interest stands to gain. Typically, the policies that serve special interests take America further from the politicians' original stated objective and move toward environmental degradation, inefficient energy use, and higher prices for families and businesses.

The Nuclear Industry: A Case Study of Government Micromanagement

The natural consequence of government micromanagement is perhaps best illustrated in the nuclear industry. Nuclear energy supplies 19 percent of America's electricity, exceeded by only coal and natural gas. It is reliable, affordable, and creates no greenhouse gas emissions. Nuclear plants—including their byproduct, nuclear waste—have relatively small physical footprints for the billions of kilowatts produced. America's nuclear plants are among the safest in the world and on average provide $470 million in economic activity and 400–700 well-paying jobs.[23]

Yet protracted permitting timetables, ill-conceived regulations, and other government-imposed market distortions create so much risk and price inflation that some believe the industry needs subsidies to compete and offset the negative impacts of these poli-

21. Gordon Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft," *Western Economic Journal*, Vol. 5, No. 3 (1967), pp. 224–232, and Anne O. Krueger, "The Political Economy of the Rent-Seeking Society," *American Economic Review*, Vol. 64, No. 3 (June 1974), pp. 291–303.

22. Nicolas Loris, "EFEPA Eliminates Corporate Welfare and Corporate Dependence," Heritage Foundation *Issue Brief* No. 3828, January 15, 2013, http://www.heritage.org/research/reports/2013/01/energy-tax-credits-impact-of-energy-freedom-and-economic-prosperity.

23. Nuclear Energy Institute, "Nuclear Power Plants Benefit State and Local Economies," July 2014, http://www.nei.org/Master-Document-Folder/Backgrounders/Fact-Sheets/Nuclear-Power-Plants-Contribute-Significantly-to-S (accessed August 29, 2014).

cies. The Nuclear Regulatory Commission operates under an outdated regulatory system that has yet to adapt to new technology and designs, and it overregulates existing nuclear plants and technologies.[24]

Because navigating this expensive and onerous regulatory gauntlet is nearly impossible for any private company to do alone, they rely on taxpayer help. For example, the Department of Energy pays for some projects and provides loans and loan guarantees to a lucky few to test technology or to build plants that the government finds promising.

The problem is that these subsidies are counterproductive. The subsidies give the nuclear industry enough money to partially offset the cost of bad policy, feed the Washington bureaucracy, and allow politicians to claim that they support nuclear power. In the end, commercially relevant nuclear technology stagnates because the incentives to reform the broken system have been removed.

Perhaps the largest barrier to the American commercial nuclear industry is what has—or more accurately, has not—been done with waste. The Department of Energy is responsible for collecting and disposing of waste from commercial nuclear plants, and the resulting government monopoly has played a significant role in choking new growth in domestic commercial nuclear energy by adding political inefficiency and uncertainty to the process. To date, the government has not collected any commercial spent nuclear fuel, and the national repository at Yucca Mountain remains unfinished.

The commercial nuclear industry has a lot to offer American customers in the way of safe, efficient, abundant, and inexpensive energy, but that will require removing politics and burdensome government policies from the picture and replacing them with free-market policies to unlock nuclear energy's potential.

Creating More Opportunities and Removing Favoritism

Reducing the government's involvement in the energy economy will both create more opportunities for truly competitive technologies and remove favoritism toward specific technologies and companies. Allowing price signals to drive innovation, investment, and decision making will spur economic growth, create jobs, and save money for the taxpayer. When risks and rewards are properly aligned, economically viable ideas will flourish.

To this end, Congress should:

- **Not crowd out private investment with direct handouts.** Congress should ensure that no taxpayer dollars go directly to energy production, storage, efficiency, infrastructure, or transportation for nongovernment consumers. While this type of spending is important, the private sector should make these investments and is in a better position to make the investments that would meet consumers' needs.

- **Expedite the sunsetting of targeted tax credits.** Special tax treatment serves the same purpose as a subsidy that favors one industry. Congress should not create any new tax credits for energy production, energy infrastructure, transportation (production and consumption), or energy efficiency initiatives. Congress should expedite the sunsetting of existing tax credits and reduce other taxes by the amount of revenue generated by eliminating the tax credits.

- **Open access to domestic and foreign markets.** With its wealth of natural resources, the U.S. could offer even more opportunities to reap the economic benefits of domestic production by opening federal lands and federal waters that are currently off-limits to exploration and development. Furthermore, the recent growth in domestic energy production has positioned the United States 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 by lifting restrictions on liquefied natural gas and crude oil.[25]

24. Jack Spencer, "Nuclear Waste Management: Minimum Requirements for Reforms and Legislation," Heritage Foundation *Issue Brief* No. 3888, March 28, 2013, http://www.heritage.org/research/reports/2013/03/nuclear-waste-management-minimum-requirements-for-reforms-and-legislation.
25. Nicolas D. Loris, "Energy Exports Promote Prosperity and Bolster National Security," Heritage Foundation *Backgrounder* No. 2931, July 23, 2014, http://www.heritage.org/research/reports/2014/07/energy-exports-promote-prosperity-and-bolster-national-security.

- **Repeal the Renewable Fuel Standard (RFS).** By requiring fuel blenders to use biofuels regardless of the cost, the RFS has made most Americans worse off through higher food and fuel expenses. The higher costs paid by American families benefit a select group of special interests that produce renewable fuels. Tinkering around the edges will not rescue this unworkable policy. Moreover, the federal government should not mandate which type of fuel drivers use in the first place. Congress should repeal the RFS.

- **Prevent new efficiency mandates and restructure existing ones.** Washington should realize that the economy does not need government mandates, rebate programs, or spending initiatives to make businesses and homeowners more energy efficient. Consumers will make those choices by themselves and the government should not override their choices by nudging them toward the government's preferred outcome. Ultimately, Congress should eliminate existing efficiency mandates or restructure them as voluntary standards in which businesses and consumers can choose their level of participation.[26]

- **Prohibit any new loan guarantees or other capital subsidy programs.** The Department of Energy should not play banker. Its capital subsidy programs distort normal market forces and encourage dependence on government because the government subsidizes a portion of the actual cost of a project, diverting capital away from more competitive projects.

- **Restructure public power.** Federal utilities known as Power Marketing Administrations were set up to provide cheap electricity to rural areas. They can sell electricity at below-market rates because of their favorable financing terms, such as federal tax exemptions and loans at below-market interest rates. Their construction, rehabilitation, operation, and maintenance costs are financed through the main Department of Energy budget, offset collections, alternative financing, and a reimbursable agreement with the Bureau of Reclamation. Furthermore, rural electric cooperatives are private organizations, in many cases nonprofit, that provide about 12 percent of the nation's electricity sales. RECs receive special tax exemptions and low-interest loans from the government. Congress should remove privileges for federal utilities, municipal power companies, and electricity cooperatives, and ultimately sell the Power Marketing Administrations to private buyers.[27]

- **Restructure insurance and risk mitigation.** Several government programs offer liability insurance schemes for specific industries. Proponents usually argue that these programs support industries that are vital to the national interest, but so high-risk that they would be unprofitable without subsidies. Two examples are the $75 million liability cap for offshore oil and gas operations and the Price–Anderson Act of 1957, which provides a liability regime for the nuclear industry that extends through 2025. The free-market solution is generally to eliminate these subsidies, but given the broken tort system and increasingly onerous federal regulation, these subsidies often offset government-created risks. Any discussion of removing liability insurance subsidies should include proposals to ease the regulatory burden on the affected industry.[28]

- **Repeal the Jones Act.** Enacted nearly a century ago, the Jones Act mandates that any goods shipped by water between two points in the United States must be transported on a U.S.-built, U.S.-flagged, and at least 75 percent U.S.-crewed vessel. By preventing foreign competition, the Jones Act significantly increases domestic maritime shipping prices to the benefit of the Ameri-

26. Nicolas D. Loris, "Government Energy-Efficiency Programs Are Subsidy-Laden Paternalism," Heritage Foundation *Backgrounder* No. 2832, August 1, 2013, http://www.heritage.org/research/reports/2013/08/government-energy-efficiency-programs-are-subsidy-laden-paternalism.
27. Ken G. Glozer, "Time for the Sun to Set on the Tennessee Valley Authority," Heritage Foundation *Backgrounder* No. 2904, May 5, 2014, http://www.heritage.org/research/reports/2014/05/time-for-the-sun-to-set-on-the-tennessee-valley-authority.
28. For a comprehensive solution to offshore oil spill liability, see Nicolas D. Loris, Jack Spencer, and James Jay Carafano, "Oil Spill Liability: A Plan for Reform," Heritage Foundation *Backgrounder* No. 2446, August 2, 2010, http://www.heritage.org/research/reports/2010/08/oil-spill-liability-a-plan-for-reform.

can shipping industry, driving up costs for American businesses and consumers.[29]

- **End Export–Import Bank funding.** The U.S. Export–Import Bank provides government-backed loans, loan guarantees, and capital and credit insurance to foreign firms to buy U.S. exports. Producers of energy technologies and equipment have been significant beneficiaries of the bank, accounting for 30 percent of the loans and guarantees in the past year. While the bank was designed to promote exports, it is corporate welfare that benefits politically connected companies, distorts markets, and saddles taxpayers with risk.[30]

- **Eliminate government attempts to commercialize technologies.** For far too long, the Department of Energy has attempted to use taxpayer money to drive technologies to the market, crippling the role of entrepreneurs and wasting billions of taxpayer dollars in the process. The rationale for these initiatives is that a gap exists between basic research and economic viability and that spending more taxpayer money will attract private investment for commercialization. When the government attempts to drive technological commercialization, it circumvents the competitive process that properly assigns risks and rewards in an open market. By removing capital from the private sector to support government-supported projects, this intervention also creates a dependency on the taxpayer that can hinder innovation over the long term. Basic research that has promising commercial application will attract private investment. Some investments will succeed, and others will fail. Other research will not ultimately spin off into market successes. Using taxpayer dollars to force commercialization is wasteful and disregards how markets and private investment efficiently determine how best to allocate investments.

- **Allow all energy projects to form master limited partnerships.** Master limited partnerships (MLPs) are taxed as limited partnerships, but are publicly traded on the stock market. In the energy sector, the ability to form MLPs is available for mineral extraction, natural gas, oil, pipelines, geothermal, and the transportation and storage of ethanol, biodiesel, and other alternative fuels. Other renewable energy generation and commercial nuclear activities do not qualify. Congress should allow all energy project investors to form MLPs. Congress should also eliminate the tax credits for conventional and renewable energy sources and technologies while lowering the corporate tax rate to encourage investment.[31]

- **Prohibit regulations that drive out energy sources for little to no environmental benefit.** The federal government has implemented stringent regulations that disproportionately affect certain energy sources or technologies. For instance, the Environmental Protection Agency's New Source Performance Standards for new power plants set greenhouse gas emission regulations so stringent that they effectively prohibit construction of new coal-fired power plants.[32] By significantly reducing the use of coal, the EPA's greenhouse gas regulations will drive up energy costs for American families for no meaningful benefit.[33] Pollution should not go unchecked, but the EPA continually misrepresents costs, exag-

29. Brian Slattery, Bryan Riley, and Nicolas D. Loris, "Sink the Jones Act: Restoring America's Competitive Advantage in Maritime-Related Industries," Heritage Foundation *Backgrounder* No. 2886, May 22, 2014, http://www.heritage.org/research/reports/2014/05/sink-the-jones-act-restoring-americas-competitive-advantage-in-maritime-related-industries.
30. Nicolas Loris, "Ending Ex–Im Would Remove Wasteful Energy Subsidies," Heritage Foundation *Issue Brief* No. 4229, May 28, 2014, http://www.heritage.org/research/reports/2014/05/ending-exim-would-remove-wasteful-energy-subsidies.
31. Nicolas Loris, "Master Limited Partnerships and Renewable Energy Producers," Heritage Foundation *Issue Brief* No. 3922, April 24, 2013, http://www.heritage.org/research/reports/2013/04/master-limited-partnerships-and-renewable-energy-producers.
32. Nicolas Loris, "EPA Proposes Next Step of Regulatory Cap-and-Trade," Heritage Foundation *Issue Brief* No. 4232, June 3, 2014, http://www.heritage.org/research/reports/2014/06/epa-proposes-next-step-of-regulatory-cap-and-trade.
33. Chip Knappenberger, "Climate Impacts of Waxman–Markey (Part II)—Global Sign-Up," Master Resource, May 7, 2009, https://www.masterresource.org/climate-policy/part-ii-a-climate-analysis-of-the-waxman-markey-climate-bill-what-if-the-world-played-along/ (accessed September 26, 2014).

gerates benefits, and uses unsound science to justify unreasonable regulations that have little to do with the costs and benefits and much to do with targeting particular energy sources.[34]

- **Finish the permit application for the Yucca Mountain nuclear materials repository.** Any sustainable, long-term solution for nuclear waste management requires geologic storage. Taxpayers and electricity rate payers have spent more than $15 billion on the Yucca Mountain site, and no technical or scientific evidence has yet disqualified it as a viable option. The Nuclear Regulatory Commission should complete its review of the permit application.[35]

- **Remove the responsibility for nuclear waste management from the federal government.** Like other commercial for-profit endeavors, nuclear power companies, not the government, should be responsible for the waste they produce. This has been the key to success in other countries. At the very least, private companies should be allowed to compete with a government-operated waste management service. Market-based pricing would allow the true costs of nuclear power to be known, spur innovation in waste management, and enable nuclear power companies to choose services that make the most sense for their customers.[36]

Remove Favoritism, Create Opportunity

Both federal and state governments have other mechanisms that play energy favorites. For instance, some states have renewable portfolio standards that mandate meeting a certain percentage of their electricity with renewables, which guarantees a market for renewable energy. Rather than attempting to "level the playing field" by out-subsidizing one another for specific energy beneficiaries, federal and state government should remove all market distortions. If implemented, these policy reforms would go a long way toward removing the privileges that various special interests receive because of their political connections and create opportunities for all market participants. A free-market energy economy would benefit all Americans rather than just a select few special interests.

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34. U.S. Senate, Committee on Environment and Public Works, Minority Staff, *EPA's Playbook Unveiled: A Story of Fraud, Deceit, and Secret Science*, March 19, 2014, http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=b90f742e-b797-4a82-a0a3-e6848467832a (accessed September 26, 2014).
35. Jack Spencer, "Yucca Mountain and Nuclear Waste: A New Beginning?" Heritage Foundation *WebMemo* No. 3085, December 16, 2010, http://www.heritage.org/research/reports/2010/12/yucca-mountain-and-nuclear-waste-policy-a-new-beginning.
36. Jack Spencer, "Blue Ribbon Commission on Nuclear Waste: Missing Opportunity for Lasting Reform," Heritage Foundation *Backgrounder* No. 2600, August 22, 2011, http://www.heritage.org/research/reports/2011/08/blue-ribbon-commission-on-nuclear-waste-missing-opportunity-for-lasting-reform.