

THE WIND PRODUCTION TAX CREDIT AND THE CASE FOR ENDING ALL ENERGY SUBSIDIES

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In a *New York Times* article entitled “A New Era for Windmill Power,” journalist Matthew Wald writes,

A new generation of windmills that Don Quixote could never tilt at is ready to take its place as an economical and important source of the nation’s energy.

Because of striking improvements in technology, the commercial use of these windmills, or wind turbines as the builders call them, has shown that in addition to being pollution free, they can now compete with fossil fuels in the cost of producing electricity.¹

Although Wald’s article reads like it could be found in this morning’s *New York Times*, it was actually written in 1992—the same year Congress passed and President George Bush Sr. signed into law the Energy Policy Act of 1992, which provided a renewable-energy-production tax credit, which has largely benefited wind companies and is now more commonly known as the wind production tax credit (wind PTC).² The wind PTC was set to expire on December 31, 2012,³ but was extended as part of the negotiations to avoid a combination of tax increases and government spending cuts.⁴

The discussion over the wind PTC extension serves as a useful microcosm of the debate over energy subsidies in general. Proponents of the wind PTC and other energy subsidies argue that government support is essential to spur innovation, compensate for decades of

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1. Matthew L. Wald, *A New Era for Wind Power*, N.Y. TIMES, Sept. 8, 1992, at C2, available at <http://www.nytimes.com/1992/09/08/business/a-new-era-for-windmill-power.html?pagewanted=all&src=pm>.

2. Renewable Energy Production Incentive, Energy Policy Act of 1992, 42 U.S.C. § 13317a (current version at 42 U.S.C.A. § 13317 (West 2005)).

3. Producers that built windmills in 2012 would have continued to receive the subsidy until 2022 because a producer is eligible to receive the subsidy for ten years after installation.

4. American Taxpayer Relief Act of 2012, Pub. L. No. 112–240, 126 Stat. at 2314, § 407.

conventional-fuel subsidies, compete with other nations, prepare for replacement of fossil fuel resources we are rapidly exhausting, and reduce global warming.⁵ Advocates argue that if the subsidy is not extended, the industry will atrophy and jobs would be lost.⁶

Opponents respond that extending the wind PTC will not save the planet, replace conventional fuels, or lead America to energy independence. Instead, opponents argue that an extension of the wind PTC will perpetuate subsidization in the American energy sector and encourage technological stagnation by shifting resources away from productive use.⁷ This Article argues that Congress and the administration should work to remove all subsidies for all energy sources to transform our energy economy into a competitive, market-oriented system.

I. WHAT ARE SUBSIDIES?

The general economic rule of thumb is that if you want less of something, tax it, and if you want more of something, subsidize it. Subsidies come in many shapes and sizes and are thus often difficult to define comprehensively. Direct spending, targeted tax credits, loan guarantees, production mandates, and policies that artificially lower the risk of an activity are all part of the energy-subsidy world. However, this is certainly not an all-encompassing list. The definition of a subsidy as a direct transfer of money to a group or industry is underinclusive.

While this Article will mostly examine one type of subsidy—the wind PTC—it will use the following broader definition of subsidy: *Using the political process to support the production or consumption of one good over another.*

II. WHY SUBSIDIES ARE BAD ECONOMIC POLICY

Subsidies are bad economic policy because they misallocate resources and reward political connectedness as opposed to sound economic ideas. In general, there are two types of companies that

5. AM. WIND ENERGY ASS'N, THE AMERICAN WIND INDUSTRY URGES CONGRESS TO TAKE IMMEDIATE ACTION TO PASS AN EXTENSION OF THE PTC (2012), *available at* http://www.awea.org/issues/federal_policy/upload/PTC-Fact-Sheet.pdf.

6. *Id.*

7. DAVID E. DISMUKES, REMOVING BIG WIND'S "TRAINING WHEELS": THE CASE FOR ENDING THE FEDERAL PRODUCTION TAX CREDIT 5–6 (2012), *available at* <http://www.americanenergyalliance.org/wp-content/uploads/2012/10/Dismukes-Removing-Big-Winds-Training-Wheels.pdf>.

receive subsidies. First, there are companies that receive subsidies because their technologies need help from the government and cannot compete economically without taxpayer support. Second, there are companies that would, and often do, receive investment from the private sector because their technology is profitable or because investors find their technology promising. In this second case, the subsidy partially offsets private-sector investments that would have been made without the subsidy, and taxpayer dollars pad the company's bottom line.

Government support that targets one industry or technology over another encourages technological stagnation. A special endorsement from the government gives one technology an unfair price advantage over other technologies, which reduces competition. Further, subsidies reduce the incentive for an industry to make their technology cost-competitive by encouraging dependence on preferential treatment provided by the government.

The wind PTC is a perfect example of a technology's continued dependence on subsidies. Although the American Recovery and Reinvestment Act of 2009 (ARRA) set a clear end date for the wind PTC of December 31, 2012, the entire industry lobbied and successfully pushed through an extension.⁸ In an April 2013 column in *The Wall Street Journal*, Patrick Jenevein, CEO of the clean energy firm Tang Energy Group, acknowledged the problems with his own industry's dependence on subsidies.⁹ Specifically, Jenevein stated, "Government subsidies to new wind farms have only made the industry less focused on reducing costs. In turn, the industry produces a product that isn't as efficient or cheap as it might be if we focused less on working the political system and more on research and development."¹⁰

This is no special vice of the wind industry—the same has been true of the ethanol industry and many other industries, which have also benefited from favorable treatment by the government.

When the 2004 Volumetric Ethanol Excise Tax Credit was set to expire at the end of 2010, Congress extended the credit by another

8. Raju Chebium, *Wind Energy Has Small Slice of Energy Pie but Big Lobbying Push for Tax Credit*, COLORADOAN.COM (Dec. 7, 2012), <http://www.coloradoan.com/article/20121207/NEWS01/312070013/Wind-energy-has-small-slice-energy-pie-big-lobbying-push-tax-credit>.

9. Patrick Jenevein, *Wind-Power Subsidies? No Thanks.*, WALL ST. J., Apr. 1, 2013, at A13, available at http://online.wsj.com/article/SB10001424127887323501004578386501479255158.html?mod=WSJ_Opinion_LEADTop.

10. *Id.*

year after the corn lobby pushed hard for an extension.¹¹ Although the credit expired at the beginning of 2012, the corn lobby pushed and obtained tax credits for fueling infrastructure and advanced biofuels.¹² These special tax breaks benefit an industry that already has a guaranteed share of the fuel market. The Energy Policy Act of 2005 and the Energy Independence and Security Act extended a Renewable Fuel Standard that requires the United States to blend thirty-six billion gallons of ethanol into gasoline by 2022.¹³ The industry's continual clinging to taxpayer-funded handouts is a result of receiving the initial tax credit, as evidenced by the boom and bust of the wind industry when the tax credit expired and then was reinstated.¹⁴ Special carve-outs encourage industry complacency and dependence on government support.

Another destructive feature of subsidies is that they allow the federal government to direct the flow of private-sector investments. Direct expenditures, targeted tax breaks, loan guarantees, and other government subsidies allocate resources away from more competitive projects. For example, if the government gives a tax credit to banana producers only, it shifts labor and capital towards banana production and away from other economic activities, like strawberry or grape production.

In effect, by politically picking winners, subsidies crowd out investment and make it difficult for new technologies that do not receive a government handout to enter the market.¹⁵ The market, and not politicians in Washington, is well-suited for determining how to allocate resources to meet consumer demand. When a firm minimizes costs, the firm maximizes profit by maximizing value to the consumer. Subsidies significantly distort that process.

11. Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, H.R. 4853, 111th Cong. § 708(d) (2010), available at <http://www.govtrack.us/congress/bills/111/hr4853>.

12. Kirsten Korosec, *Why the Anti-Tax Lobby Saved Corn Ethanol—For Now*, CBSNEWS.COM (June 15, 2011, 7:53 AM), http://www.cbsnews.com/8301-505123_162-43045595/why-the-anti-tax-lobby-saved-corn-ethanol—for-now/.

13. Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (codified in scattered sections of 42 U.S.C.); Energy Independence and Security Act of 2007, Pub. L. No. 110–140, 121 Stat. 1492 (codified in scattered sections of 42 U.S.C.).

14. AM. WIND ENERGY ASS'N, *supra* note 5.

15. See Chung-Lei Yang, *Rent Seeking, Technology Commitment, and Economic Development*, 154 J. INSTITUTIONAL & THEORETICAL ECON. 640, 653–55 (1998) (discussing market inefficiencies resulting from subsidies).

Subsidies also make for poor economic policy because they politicize the economic process by allowing the federal government to highly influence decisions and investments. Industries that stand to benefit from subsidies concentrate more effort into lobbying for the subsidies and for preventing competitors from receiving similar handouts. Banana producers push for tax-credit extensions; in response, apple producers complain that they are at a disadvantage and lobby for their own handouts.

Companies and politicians both stand to profit from this perverse system. Taxpayer-funded subsidies create a system of cronyism between government and industry. The process can be (albeit simplistically) described as playing out in roughly three steps. First, Industry X hires lobbyists to meet with Congressman Smith and tell him that if he moves the subsidy legislation into law, Industry X will build the plant in Congressman Smith's district. Second, Congressman Smith says to his constituents and his state that his hard efforts brought jobs and economic growth, which certainly cannot hurt come re-election time. It also does not hurt that Industry X is contributing to Congressman Smith's campaign. Third, Congressman Smith wins re-election, and both he and Industry X clamor that the subsidy's expiration will hurt the local economy because Industry X will face layoffs. This process typically results in Industry X securing an extension of the subsidy and Congressman Smith holding onto his seat in Congress.

This tendency of the political process to continually pick winners and losers was first identified by economist Gordon Tullock¹⁶ and later defined by economist Anne Krueger as "rent-seeking."¹⁷ Its greatest costs result from distorting economic activity. The resources a banana producer used for lobbying for banana tariffs or an extension of the banana tax credit could have been spent actually growing and selling bananas. Rather than engaging in profit-seeking behavior in the marketplace, the producer is engaging in rent-seeking behavior in the political process. Thus, the more the government becomes involved in making economic decisions that are best left to the private sector, the higher the perverse incentive to lobby. While this does create a few lobbyist jobs, much consumer value is lost.

16. See generally Gordon Tullock, *The Welfare Costs of Tariffs, Monopolies, and Theft*, 5 W. ECON. J. 224 (1967).

17. Anne Krueger, *The Political Economy of the Rent-Seeking Society*, 64 AM. ECON. REV. 291 (1974).

Economist Russell Sobel of West Virginia University defines rent-seeking as unproductive entrepreneurship.¹⁸ Political efforts made by rent-seeking companies could have been channeled toward productive uses instead of distorting economic activity.¹⁹ Sobel found that states that provide more political preferences have higher levels of unproductive entrepreneurship and lower levels of productive entrepreneurship, and therefore have slower economic growth.²⁰

Conversely, reducing government control of the energy economy reduces the incentive to use the political process for gain. While rent-seeking activity occurs in many sectors of the economy, the debate over the wind PTC extension provides an excellent example. Although clamoring from the wind industry for an extension of the subsidy occurred for all of 2012 until Congress passed an extension,²¹ it is important to put much of this clamoring into context for future debates on energy subsidies.

III. REFUTING COMMON CLAIMS FOR JUSTIFICATION OF THE WIND PTC

Advocates for extending the wind PTC often argue that without an extension, the industry will lose jobs, America will move further away from energy diversity and towards dependence on foreign oil, and the planet will continue to warm.²² However, such arguments are narrow and short-sighted, ignoring economic, energy-supply, and global-climate realities.

A. The Only Jobs Lost Are Those Propped Up by the Taxpayer

An enticing and attractive argument for the wind industry to make, especially in a recessionary economic environment, is that jobs will be lost with the subsidy's expiration. This argument, however, could apply to just about any sector of the economy. Take VHS or videotape producers, for example. Imagine the VHS industry writing this letter to Congress:

VHS has been a staple of the American way of watching television and movies. VHS has supported countless manufacturing jobs, and even though there are better products out there, let's face it: we

18. Russell Sobel, *Testing Baumol: Institutional Quality and the Productivity of Entrepreneurship*, 23 J. BUS. VENTURING 641, 646 (2008).

19. *Id.*

20. *Id.* at 648.

21. Chebium, *supra* note 8.

22. *See, e.g.*, AM. WIND ENERGY ASS'N, *supra* note 5.

need a variety of ways to watch our programs. The states and local economies that have VHS production facilities have experienced and benefited from VHS production, but without a little help from the taxpayers, jobs will be lost and the industry will atrophy. VHS production has bipartisan support, will be good for American manufacturing jobs, and will diversify our program-watching ability. America needs VHS, and VHS needs the taxpayers' help.

Windmills are no different than VHS tapes. The argument that, without extending the PTC, domestic energy production and American jobs will be lost is an equally flawed line of economic reasoning. The history of the wind PTC makes this point clear. Congress first passed the PTC in 1992 but allowed it to expire several times.²³ The PTC expired in 2000, 2002, and 2004, and annual wind installation decreased by 93 percent, 73 percent, and 77 percent, respectively.²⁴ Wind energy advocates call this a boom-and-bust cycle created by unstable policy,²⁵ but it is more likely a case of the wind PTC's oversupplying a market and artificially propping up a large portion of wind production. Predictably, in response to the looming expiration date, extending the wind PTC had bipartisan support. In fact, two Republican governors sent a letter similar to the hypothetical VHS letter to the House of Representatives and the Senate, urging them to pass the wind PTC extension.²⁶

The Republican governors' letter cites a study by the economic consulting firm Navigant that estimates nearly half the wind jobs will be lost if Congress fails to act.²⁷ With enough taxpayer dollars, America can prop up just about any industry, even VHS, but that does not mean those jobs are adding value and growing the economy.

If Navigant's numbers are accurate, they indicate that the PTC subsidy has shifted labor and capital away from other, more productive sectors of the economy and towards wind.²⁸ Moreover, it shows that the entire wind industry will not disappear with the PTC,

23. Renewable Energy Production Incentive, Energy Policy Act of 1992, 42 U.S.C. § 13317a (current version at 42 U.S.C.A. § 13317 (West 2005)).

24. AM. WIND ENERGY ASS'N, *supra* note 5.

25. AM. WIND ENERGY ASS'N, PRODUCTION TAX CREDIT (2012), *available at* http://awea.org/issues/federal_policy/upload/PTC_April-2011.pdf.

26. Letter from Terry E. Brandstad, Governor, & Sam Brownback, Governor, to Conference Committee Members (Feb. 1, 2012), *available at* <http://www.awea.org/newsroom/pressreleases/loader.cfm?csModule=security/getfile&pageid=13871>.

27. *Id.* (citing NAVIGANT CONSULTING INC., IMPACT OF THE PRODUCTION TAX CREDIT ON THE U.S. WIND MARKET 24 (2011), *available at* http://www.awea.org/_cs_upload/learnabout/publications/reports/12538_3.pdf).

28. *See id.* (showing increased wind jobs during period of PTC).

indicating that some wind energy can compete in the electricity market without subsidies. The sector of the wind industry that does remain will be the healthier, robust part—the part that sells an economically viable product without the subsidy.

B. We Are Not Running Out of Fossil Fuels and Even if We Were, So What?

Another common justification for energy subsidies is that the United States has a limited amount of fossil-fuel resources and that domestically produced wind energy will put America on the track to energy independence. This is a shortsighted and unconvincing argument.

First, America has an abundance of domestic conventional-fuel resources. Coal is the single largest electricity source in America; for years, it is has been used for nearly half of all domestic electricity generation.²⁹ With 497 billion tons of recoverable domestic resources—enough to provide electricity in North America for 500 years at current consumption rates—coal has the potential to be a useful energy resource long into the future.³⁰

Further, natural gas is taking on more of a role in the energy sector. North America has approximately 4.2 quadrillion (4244 trillion) cubic feet of recoverable natural gas, which would satisfy 175 years' worth of consumption at current rates.³¹ The price of domestic natural gas is currently so low that companies have largely stopped drilling for dry-gas-only wells and instead are drilling where they can find wet gas or a combination of oil and gas.³²

It is also useful to stress that these estimates are far from definitive. The history of global oil reserves, for example, provides a valuable lesson for believers of imminent resource exhaustion. Three decades ago, proven oil reserves were 645 billion barrels; five years ago, reserves were 1.28 trillion barrels; and in 2009, reserves increased

29. U.S. ENERGY INFO. ADMIN., *ELECTRICITY IN THE UNITED STATES* (2013), available at http://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states.

30. INST. FOR ENERGY RESEARCH, *NORTH AMERICAN ENERGY INVENTORY 16–17* (2011), available at <http://www.energyforamerica.org/wp-content/uploads/2012/06/Energy-InventoryFINAL.pdf>.

31. *Id.* at 9.

32. Mark Passwaters, *Massive Shift to Liquids Under Way, But Analysts Say It May Not Move Gas Prices*, SNL FIN. (Feb. 9, 2012), <http://www2.snl.com/Interactivex/article.aspx?CdId=A-14173382-12848>.

to 1.34 trillion barrels.³³ Even as the world consumes more oil than ever before, innovative technologies have helped discover and extract more crude oil. Meanwhile, the technological one-two punch of horizontal drilling and hydraulic fracturing has led to extraction of new reserves, tapping into areas where oil and gas recovery was previously thought to be uneconomical.³⁴

Simply because the United States has these resources underneath its soil does not mean that they must be used. If another energy source is more affordable, then coal and natural gas can stay in the ground. If America were depleting its conventional fuels, it would be good news for wind proponents. Decreasing supplies of fossil fuels would drive up their price and make alternative power generation more economical. Price signals would trigger investments in competing technologies, and technologies that could provide lower-cost electricity would capture more of the market.

Additionally, there are competing uses for electricity-generating resources. For instance, not only does natural gas provide over thirty percent of America's electricity generation, but it also serves as feedstock for fertilizers, chemicals, and pharmaceuticals, and is used for waste treatment, food processing, fueling industrial boilers, and much more.³⁵ There is a profound complexity in producers' preference for selling their resources to those who are willing to pay more because they value the resource more. That complexity should not be manipulated or distorted by politicians; the market is a much better arbiter of how resources are best allocated.

Importantly, the demand for electricity is, for the most part, stable. Although businesses and consumers may use less electricity during a recession, overall demand persists.³⁶ The global market for electricity is a multi-trillion dollar market that continues to grow.³⁷

33. *Energy Solutions for America—The Heritage Foundation*, THE LIBRE INITIATIVE, <http://www.thelibreinitiative.com/public/energy-solutions-for-america-the-heritage-foundation-373.html> (last visited Mar. 28, 2013).

34. Scott Tong, *The Oil Man Who Figured Out Fracking*, MARKETPLACE (Dec. 7, 2012), available at <http://www.marketplace.org/topics/sustainability/oil-man-who-figured-out-fracking>.

35. *Uses in Industry*, NATURALGAS.ORG, http://www.naturalgas.org/overview/uses_industry.asp (last visited Mar. 25, 2012).

36. NORTH AMERICAN ELECTRIC RELIABILITY CORP., 2009 SUMMER RELIABILITY ASSESSMENT 1 (2009), available at <http://www.nerc.com/files/summer2009.pdf>.

37. See FATIH BIROL, INT'L ATOMIC ENERGY AGENCY, POWER TO THE PEOPLE: THE WORLD OUTLOOK FOR ELECTRICITY INVESTMENT (2004), available at http://www.iaea.org/Publications/Magazines/Bulletin/Bull461/power_to_the_people.html (explaining that world electricity demand is projected to double between 2000 and 2030).

The resource that can provide the most value to the consumer will certainly have its place in it.

C. The Futility of Politicized Energy Independence

Eliminating American dependence on foreign oil—making the United States “energy independent”—is a popular notion that politicians on both sides of the aisle love to invoke. Yet, campaigning for more renewable energy such as wind and solar to replace foreign oil is a non sequitur. Wind and solar energy are used for electricity generation. Since oil generates less than one percent of America’s electricity,³⁸ it is misleading to suggest that wind and solar generation would affect oil consumption.

U.S. electricity is largely supplied by domestic sources, and those energy resources that the United States does import come from a diversity of suppliers, many of which are friendly allies. In 2011, 42 percent of U.S. electricity generation came from coal, 19 percent from nuclear, 25 percent from natural gas, and 13 percent from renewable sources, the majority of which come from hydroelectric power.³⁹ Most of the coal that the United States does import (only one percent of total consumption) comes from Colombia,⁴⁰ and 90 percent of the imported natural gas comes from Canada, with much of the rest coming from Trinidad.⁴¹ Out of the 2,472 billion cubic feet of natural gas consumed in December 2012 in the United States, only 3.7 percent came from net imports.⁴² The United States also imports most of its uranium from Canada and Australia.⁴³ Oil is a different story. The country’s three single biggest oil suppliers are Canada, Saudi Arabia, and Mexico.⁴⁴

38. U.S. ENERGY INFO. ADMIN., HOW MUCH OF OUR ELECTRICITY IS GENERATED FROM RENEWABLE ENERGY? (2012), available at http://www.eia.gov/energy_in_brief/article/renewable_electricity.cfm.

39. *Id.*

40. U.S. ENERGY INFO. ADMIN., COAL EXPLAINED, COAL IMPORTS AND EXPORTS (2012), available at http://www.eia.gov/energyexplained/index.cfm?page=coal_imports.

41. *Id.*; U.S. ENERGY INFO. ADMIN., U.S. NATURAL GAS IMPORTS BY COUNTRY (2012), available at http://www.eia.gov/dnav/ng/ng_move_imp_c_s1_m.htm.

42. U.S. ENERGY INFO. ADMIN., U.S. NATURAL GAS: MONTHLY SUPPLY AND DISPOSITION BALANCE (2013), available at http://www.eia.gov/dnav/ng/ng_sum_sndm_s1_m.htm.

43. U.S. ENERGY INFO. ADMIN., URANIUM MARKETING ANNUAL REPORT (2012), available at <http://www.eia.gov/uranium/marketing/>.

44. U.S. ENERGY INFO. ADMIN., PETROLEUM & OTHER LIQUIDS: WEEKLY PRELIMINARY CRUDE IMPORTS BY COUNTRY OF ORIGIN (2013), available at http://www.eia.gov/dnav/pet/pet_move_wimpc_s1_w.htm.

Nevertheless, energy independence is not an appropriate policy goal. Oil is a global commodity, and whether the United States is a net importer or net exporter has little bearing on insulating Americans from price volatility. For comparison, even though the United States is self-sufficient in food production, domestic prices are affected by supply problems in other parts of the world.⁴⁵

Energy independence makes for a catchy sound-bite, but it should not be the goal of energy policy. The biggest threat to America's reliable and affordable energy comes in the form of domestic government interventions that artificially raise or lower prices and distort market investments through unnecessary regulations, subsidies, preferential tax treatment, and other market-distorting policies.

America's largely market-based energy policies have historically provided the nation with abundant and affordable energy resources.⁴⁶ When prices have spiked, government solutions more often than not made things worse. Unfortunately, an upward trajectory of government intervention through regulations, subsidies, mandates, and protections is threatening previous success. Americans will continue to be best served by energy markets that are free, competitive, and open. Ensuring that such energy markets are free, competitive, and open should be the main focus of American energy policy.

D. No Impact on Climate Change

If the United States has a robust, diverse energy supply, why subsidize a number of energy technologies? One ostensible reason is to reduce the nation's carbon footprint. Reducing global warming is much of the motivation behind subsidizing carbon-free sources of energy or establishing a price on greenhouse-gas emissions, either by means of a carbon tax or through a cap-and-trade system that creates a cap on greenhouse-gas emissions and allows emitters to sell permits they accumulate if they are under the cap.⁴⁷

45. See, e.g., U.S. DEP'T OF AGRIC., ECON. RESEARCH SERV., GLOBAL AGRICULTURAL SUPPLY AND DEMAND: FACTORS CONTRIBUTING TO THE RECENT INCREASE IN FOOD COMMODITY PRICES 5 (2008), available at http://www1.eere.energy.gov/biomass/pdfs/global_agricultural_supply_and_demand.pdf.

46. See *The History of Regulation*, NATURALGAS.ORG, <http://www.naturalgas.org/regulation/history.asp> (last visited April 9, 2013) (deregulating natural gas and ending federal price controls helped encourage economic development).

47. *What is EPA Doing About Climate Change?*, ENVTL. PROT. AGENCY, <http://www.epa.gov/climatechange/EPAactivities.html> (last updated Apr. 22, 2013).

However, the problem with discussing climate change begins with the way politicians and the media on both sides of the aisle talk about the issue and sensationalize it to energize and motivate their respective supporters. Arguments that human activity has nothing to do with climate change or that the planet is experiencing catastrophic warming are neither truthful nor useful to the debate.

But not long ago, scientists thought that global *cooling* was a threat to the planet. As recently as 1975, *Newsweek* ran an article titled, “The Cooling World.”⁴⁸ Some proposals mentioned by climatologists in the *Newsweek* article included covering the polar ice caps with black soot to melt them.⁴⁹

Almost all climatologists and respected scientists in the climate-change community agree that carbon dioxide (CO₂) and other greenhouse gases are warming agents.⁵⁰ That agreement, however, does not come close to settling the scientific debate about the magnitude of climate change, the driving forces behind climate change, and the amount of warming projected from increased greenhouse-gas emissions. For instance, Harvard astrophysicist, Sallie Baliunas, and astronomer, Willie Soon, identify solar activity as the driving force behind climate change.⁵¹ Richard Lindzen, professor of meteorology at the Massachusetts Institute of Technology, notes that mainstream climate models fail to take into account naturally occurring cycles such as El Niño, the Pacific decadal oscillation, or the Atlantic multidecadal oscillation.⁵²

Nor does this general agreement that greenhouse gases are a warming agent tell us how much increasing greenhouse-gas emissions will contribute to sea-level rise. Even the Intergovernmental Panel on Climate Change’s projection of sea-level rise over the next century is

48. Peter Gwynne, *The Cooling World*, NEWSWEEK, Apr. 28, 1975, at 64.

49. *Id.* (“[Scientists] concede that some of the more spectacular solutions proposed, such as melting the arctic ice cap by covering it with black soot or diverting arctic rivers, might create problems far greater than those they solve.”)

50. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS: TECHNICAL SUMMARY 21 (Susan Solomon et al. eds., 2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4_wg1_full_report.pdf.

51. SALLIE BALIUNAS & WILLIE SOON, CLIMATE HISTORY AND THE SUN 11 (2001).

52. Richard S. Lindzen, Op-Ed, *The Climate Science Isn’t Settled*, WALL ST. J. (Nov. 30, 2009), available at <http://online.wsj.com/article/SB10001424052748703939404574567423917025400.html>.

a modest seven to twenty-three inches, with the lower end of that projection more likely to occur by the end of the century.⁵³

Moreover, universal agreement that CO₂ is a warming agent does not imply that the United States or the entire planet is going to experience more extreme droughts, heat waves, or other natural disasters. University of Alabama climatologist John Christy's recent testimony on this issue emphasizes that climate extremes, like the recent drought, will continue to occur with or without anthropogenic warming.⁵⁴

When discussing CO₂, it is important to first remember that CO₂ is a colorless, odorless gas that does not have direct adverse health effects unless inhaled at extremely high concentrations.⁵⁵ In other words, unlike black carbon or soot, it is a misnomer to label CO₂ as a pollutant. Policymakers typically only discuss the social cost of CO₂. They hardly ever discuss whether more CO₂ in the atmosphere could also create a positive externality or whether the benefits from living in a warmer world could outweigh the costs of CO₂ as a negative externality. A plethora of peer-reviewed literature explains that there are benefits from more CO₂ in our atmosphere, such as plant growth, human longevity, seed enrichment, and decreased soil erosion as a result of more robust tree root growth.⁵⁶

If the scientific community unanimously agreed that the Earth is warming at an unsustainable rate, policymakers and climatologists would need to act quickly and thoughtfully together. Yet the current proposed and implemented solutions, whether they involve building more wind turbines with renewable-energy subsidies, biofuel

53. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, SUMMARY FOR POLICYMAKERS 13–14 (Susan Solomon et al. eds., 2007), available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>.

54. *The American Energy Initiative: A Focus on H.R. 6172: Hearing on H.R. 6172 Before the H. Subcomm. on Energy & Power*, 112th Cong. 1 (2012) (statement of John R. Christy, Professor of Atmospheric Science, The University of Alabama in Huntsville), available at <http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/Hearings/EIP/20120920/HHRG-112-IF03-WState-ChristyJ-20120920.pdf>.

55. CTR. FOR DISEASE CONTROL & PREVENTION, DOCUMENTATION FOR IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONCENTRATIONS (IDLHS) (1994), available at <http://www.cdc.gov/niosh/idlh/124389.html>.

56. See, e.g., *Enhanced or Impaired?*, CTR. FOR THE STUDY OF CARBON DIOXIDE & GLOBAL CHANGE, <http://www.co2science.org/education/reports/health/ch3.php> (last visited Feb. 4, 2013) (discussing CO₂'s positive effect on food quantity and quality); SCI. & PUB. POLICY INST., *THE MANY BENEFITS OF ATMOSPHERIC CO₂ ENRICHMENT* (2011), available at http://scienceandpublicpolicy.org/images/stories/papers/other/55_benefits_of_co2_pamphlet.pdf (discussing CO₂'s positive effect on air pollution, food production, biodiversity, and other issues).

mandates, cap-and-trade systems, or carbon taxes, will have a negligible impact on the climate while imposing certain significant costs on quality of life and the economy.

E. Unilateral Emissions Reductions Fail To Reduce Global Warming

Some countries' unilateral reduction of their greenhouse-gas emissions will do next to nothing to reduce global temperatures. So, whether one believes that the Earth is headed toward climate catastrophe or that the Earth is gradually warming, there is nearly universal agreement that an all-out carbon-cutting policy in the United States would do very little to moderate global warming.⁵⁷ Even if the United States were to curb carbon emissions eighty-three percent below 2005 levels by 2050 (what cap-and-trade legislation called for), it would only reduce global temperatures by two-tenths of a degree Celsius by the close of the century.⁵⁸ Subsidizing wind production with the PTC and other carbon-free sources of energy would have even less of an effect, as those policies would not be enough to reach the U.S. cap-and-trade emissions target.

However, a common argument for unilateral reduction of greenhouse-gas emissions is that if the United States leads, the rest of the world will follow. Although future CO₂ emissions will likely come overwhelmingly from the developing world, these countries show little appetite for squeezing economic growth for uncertain climate outcomes.⁵⁹ Despite actions taken by the Environmental Protection Agency (EPA) to regulate CO₂ emissions in the United States, the developing world has yet to follow suit and it plans for massive expansion of coal consumption.⁶⁰ China surpassed the United States as the largest CO₂ emitter in 2006.⁶¹ By 2009 (the most recent year for

57. Press Release, U.S. Senate Comm. on Envtl. & Pub. Works, Jackson Confirms EPA Chart Showing No Effect on Climate Without China, India (July 9, 2009), available at http://www.epw.senate.gov/public/index.cfm?FuseAction=Minority.PressReleases&ContentRecord_id=564ed42f-802a-23ad-4570-3399477b1393.

58. Chip Knappenberger, *Climate Impacts of Waxman-Markey (Part II)*, MASTER RES. (May 7, 2009), <http://www.masterresource.org/2009/05/part-ii-a-climate-analysis-of-the-waxman-markey-climate-bill%e2%80%94what-if-the-world-played-along>.

59. Alex Morales & Kim Chipman, *China, EU Comments Show Reduced Scope of UN Climate Talks*, BLOOMBERG (Nov. 28, 2012), <http://www.bloomberg.com/news/2012-11-28/china-joins-eu-to-scale-back-outlook-for-un-climate-talks.html>.

60. Ailun Yang & Yiyum Cui, *Global Coal Risk Assessment: Data Analysis and Market Research 7–9* (World Res. Inst., Working Paper, Nov. 2012), available at http://pdf.wri.org/global_coal_risk_assessment.pdf.

61. *China Overtakes U.S. in Greenhouse Gas Emissions*, N.Y. TIMES (June 20, 2007), http://www.nytimes.com/2007/06/20/business/worldbusiness/20iht-emit.1.6227564.html?_r=0.

which information is available), China's emissions were forty-five percent higher than America's.⁶² Other developing countries are also rapidly increasing their emissions as they develop their economies and expand their power base. According to a recent report from the World Resources Institute, 59 different countries plan to build nearly 1200 coal-fired power plants, totaling over 1.4 million megawatts.⁶³ China and India alone account for 76 percent of the proposals.⁶⁴

Developing countries not only want access to cheap, reliable electricity, but they also have other, more urgent concerns than global warming. It is simply naïve to assume that these countries will follow the United States' lead and curb economic growth to reduce greenhouse-gas emissions. Demanding CO₂ emissions reductions from developing countries is immoral, and developing countries have much more pressing environmental concerns that should rightly take priority, such as gaining access to clean air and clean drinking water. China has a serious smog problem that is not a result of CO₂ and is now even affecting Japan.⁶⁵ Nearly thirty-eight million Indians suffer from a water-borne disease annually.⁶⁶ Furthermore, millions of people in these countries are without electricity, and yet the West wants them to curb their energy use or demands that they build expensive, intermittent energy capacity.⁶⁷ In July of 2012, India made headlines for the largest blackout in history, which left over 300 million without electricity.⁶⁸ Initial reports suggested that the blackout affected over 600 million people but omitted one key fact: many of India's residents never had access to electricity in the first place.⁶⁹

62. See *Millennium Development Goals Indicators*, UNITED NATIONS STATISTICS DIV., <http://mdgs.un.org/unsd/mdg/SeriesDetail.aspx?srid=749> (last updated July 2, 2012).

63. Yang & Cui, *supra* note 60, at 5.

64. *Id.*

65. See *Suffocating Smog from China Reaches Regions of Japan*, TAIPEI TIMES (Feb. 5, 2013), <http://www.taipetimes.com/News/front/archives/2013/02/05/2003554261> (discussing air pollution's carry-over effect on Japan).

66. INDIRA KHURANA & ROMIT SEN, WATERAID, DRINKING WATER QUALITY IN RURAL INDIA: ISSUES AND APPROACHES 4 (2009), available at <http://www.wateraid.org/~media/Publications/drinking-water-quality-rural-india.pdf>.

67. See DAVID JACOBS ET AL., WORLD FUTURE COUNCIL, UNLEASHING RENEWABLE ENERGY POWER IN DEVELOPING COUNTRIES 5 (2009), available at http://www.worldfuturecouncil.org/fileadmin/user_upload/_Media/REPfund_DEC_09.pdf (explaining how difficult it is to get financing for renewable energy technologies in developing countries because of the very small profit margins).

68. Tripti Lahiri, *How Many People Actually Lost Power?*, WALL ST. J. (Aug. 1, 2012, 5:06 PM), <http://blogs.wsj.com/indiarealtime/2012/08/01/how-many-people-actually-lost-power-in-india>.

69. *Id.*

These countries are not going to restrict their energy use to reduce greenhouse-gas emissions when they are still struggling towards providing the basic amenities of modern life for their people. Nor should they.

F. The Seen and the Unseen Market Distortions

Proponents of the wind PTC only take into account the visible effects of this policy. They highlight the jobs of manufacturers assembling windmills and pouring cement for the platforms.⁷⁰ They emphasize the increasing role of wind in America's electricity portfolio which reduces the amount of coal America burns.⁷¹ What proponents routinely ignore is the fact that the billions of dollars provided in subsidies do not fall freely from the sky; the federal government either borrows money from the American public or taxes the American public to pay for the subsidies. Simply put, taxpayer-funded programs do not create jobs; they shift them from one sector of the economy to another. The opportunity costs, or the unseen effects of government spending, are the lost labor and capital extracted from other sectors of the economy to artificially support the politically preferred ones.⁷² In this case, the people and components needed to sell wind electricity cannot simultaneously be used to build automobiles, washing machines, or sidewalks. By distorting economic activity, wind subsidies are actually a net drain on the economy.

One common claim touted by wind lobbyists is that wind energy creates more jobs per kilowatt hour than do conventional sources of energy.⁷³ By that reasoning, we could replace all of the world's mechanized agriculture equipment and give farmers shovels, hoes, and picks. That would certainly create jobs, but it would also significantly reduce productivity. If we can produce more energy with less labor, that frees up human resources to be productive elsewhere in the economy.

French economist Frédéric Bastiat often discussed the seen and unseen effects of decisions in the marketplace. In an 1850 essay, Bastiat wrote:

70. See AM. WIND ENERGY ASS'N, *supra* note 5 (emphasizing the jobs that are created or saved by the wind PTC).

71. *Wind Works*, SIERRA CLUB, <http://www.sierraclub.org/windworks/> (last visited Apr. 9, 2013).

72. See *supra* Part II.

73. *Electricity from the Wind . . . Economic Development for Rural Communities*, NEB. ENERGY Q. (Apr. 2004), http://www.neo.ne.gov/nej_online/april2004/apr2004.01.htm.

In the department of economy, an act, a habit, an institution, a law, gives birth not only to an effect, but to a series of effects. Of these effects, the first only is immediate; it manifests itself simultaneously with its cause—it is seen. The others unfold in succession—they are not seen: it is well for us, if they are foreseen. Between a good and a bad economist this constitutes the whole difference—the one takes account of the visible effect; the other takes account both of the effects which are seen, and also of those which it is necessary to foresee.⁷⁴

The wind PTC has had both seen and unseen effects on the economy. Unfortunately, too many people have not noticed the unseen effects.

Wind subsidies impose a number of costs on the economy. Not only do the subsidies have direct costs in terms of billions of spent taxpayer dollars,⁷⁵ but the PTC has distorting effects on the wholesale electricity market. Setting aside the fact that wind fails to be prevalent when electricity demand is most needed (when was the last time the wind was blowing consistently hard during a heat wave?),⁷⁶ wind producers can actually bid to sell their energy for less than what it costs to produce and still earn a profit because the PTC is so generous.⁷⁷ In effect, wind producers can bid negatively to supply their power because of the subsidy.

Power producers compete against one another to sell electricity to the grid. When selling electricity to grid operators, wind suppliers can underbid other electricity producers in times of excess supply, pay utilities to take their power, and still collect the \$22 per megawatt hour generated from the tax credit.⁷⁸ This is a perfect example of rent-seeking, in which the rent is so profitable that it makes more sense for wind producers to lobby for the subsidy rather than attempt to sell their product for earned profit.

74. FRÉDÉRIC BASTIAT, *That Which Is Seen, and That Which Is Not Seen*, in THE BASTIAT COLLECTION 1 (Ludwig von Mises Inst. ed., 2007), available at <https://mises.org/books/bastiat1.pdf>.

75. See J. COMM. ON TAXATION, 112TH CONG., ESTIMATED REVENUE EFFECTS OF THE CHAIRMAN'S MARK AS MODIFIED TO THE PROVISIONS OF THE "FAMILY AND BUSINESS TAX CUT CERTAINTY ACT OF 2012," SCHEDULED FOR MARK UP BY THE SENATE COMMITTEE ON FINANCE ON AUG. 2, 2012, JCX-70-12 (Comm. Print 2012), available at <http://www.finance.senate.gov/imo/media/doc/JCX.pdf>.

76. See Jonathan A. Lesser, *Wind Intermittency and the Production Tax Credit: A High Cost Subsidy for Low Value Power*, CONT'L ECON. at EX-1 (Oct. 2012), http://www.continentalecon.com/publications/ceb/lesser_ptc_report_final_october-2012.pdf ("In all three regions, over 84% of the installed wind generation infrastructure fails to produce electricity when electric demand is greatest.").

77. *Id.* at 2.

78. *Id.*

Although wind companies selling their power more cheaply to the grid sounds attractive to electricity consumers, these sales have short- and long-term adverse implications on the electricity market. In the short run, integrating an intermittent, low-value source, such as wind, into the power grid in place of a more reliable energy source makes life difficult for grid operators who are constantly trying to balance supply and demand.⁷⁹ To compensate for the irregularity and uncertainty of wind-powered electricity, wholesale operators must increase the amount of readily available backup power from conventional sources.⁸⁰ The operational costs are spread among the ratepayers.⁸¹

If wind generation were competitive in the marketplace without subsidies, then the market would adjust to wind energy's particular operating conditions. Wind's intermittency and the fact that more wind production may displace other types of electricity generation are not reasons to prevent the construction of wind turbines. The cause for concern is instead the government's intervention into electricity generation, which inevitably causes market distortions. If, after accounting for all the costs (such as backup generation and the transmission lines necessary to bring wind energy from remote locations to where the power is needed), wind is price competitive, then it will have its place in the electricity sector.

A good or service belongs in the marketplace when the value of the output is greater than the value of the input and when the output satisfies a consumer need. Subsidies reverse this by artificially reducing the costs of inputs to make the output value of wind more competitive, thus disguising the real cost and value of wind. If ratepayers value and demand wind energy, and if enough ratepayers are willing to pay a premium for that electricity, then the market will respond and provide it. Or, if the cost of wind technology decreases and the price of conventional energy increases, more wind electricity may enter the energy sector. The signals of profits and losses determine what adds economic value and should determine the extent of wind's role in our country's energy mix.

79. *See id.* at Ex-2, Ex-3 (explaining how wind blows the least when electricity is needed most in the summer and how the most efficient energy resources produce electricity when they are called on).

80. *Id.* at 18–19.

81. *Id.*

IV. THE PATH FORWARD TO REMOVING MARKET DISTORTIONS

The debate over the wind PTC extension provides a timely look into the economically destructive nature of energy subsidies. Energy subsidies extend far beyond the wind PTC. Coal, natural gas, oil, and renewable energy sources all enjoy preferential treatment at the taxpayer's expense. Congress should make it a priority to prevent any new subsidization of energy sources and technologies. Congress should also peel back the subsidies that are currently in place. Forcing sunsets on preferential tax credits and offsetting the tax increases with lower tax rates for all businesses (such as a lower corporate income tax rate) would improve the tax code and lead to better energy policy.

A. Prevent and Remove Direct Spending

Direct energy expenditures in the United States have grown, largely because of the over \$40 billion awarded to the Department of Energy (DOE) from the ARRA, also known as the stimulus bill.⁸² Of that amount, \$16.8 billion went to the Office of Energy Efficiency and Renewable Energy.⁸³ Additionally, the DOE spends billions of dollars to fund applied-research programs through its yearly budget process. Another DOE program that the Energy Information Administration (EIA) lists as a direct expenditure is the Low Income Home Energy Assistance Program (LIHEAP).⁸⁴ To prevent more direct government market distortions in the energy sector and to thus prevent wasting taxpayer dollars, Congress should prohibit funding for new subsidies, eliminate government programs that commercialize technologies, and eliminate federal programs for low-income energy assistance.

1. Prohibit any new funding

Congress should ensure that no taxpayer dollars go directly to energy production, storage, efficiency, infrastructure, or transportation for non-government consumers. While these types of projects may be important, they are better financed through the

82. *Agency Profile: Department of Energy*, RECOVERY.GOV, http://www.recovery.gov/Transparency/RecoveryData/Pages/AgencyProfile.aspx?agency_code=89 (last visited Mar. 25, 2013).

83. *American Recovery and Reinvestment Act Allots \$16.8 Billion for EERE*, U.S. DEP'T OF ENERGY (Feb. 17, 2009), http://apps1.eere.energy.gov/news/daily.cfm/hp_news_id=156.

84. U.S. ENERGY INFO. ADMIN., DIRECT FEDERAL FINANCIAL INTERVENTIONS AND SUBSIDIES IN ENERGY IN FISCAL YEAR 2010 25–26 (2011), available at <http://www.eia.gov/analysis/requests/subsidy/pdf/subsidy.pdf>.

private sector, which is better positioned to make efficient investments that meet consumers' needs.

2. Eliminate government programs to commercialize technologies

The DOE has spent billions of research dollars to reduce CO₂. Research dollars have gone towards energy-efficiency technologies, renewable energy sources, carbon capture and sequestration, clean-coal technologies, nuclear energy, and alternative-energy vehicles.⁸⁵ All of these energy sources and technologies are available today, but they are not economical, whether due to burdensome regulations or simply because they are still prohibitively expensive. It is not the government's role to force these technologies into the marketplace; thus, Congress should eliminate all DOE-funded commercial activities and focus on removing the onerous regulatory barriers that prevent energy technologies from reaching the market.⁸⁶ Congress should focus on creating a more efficient system in which the private sector can use government resources, such as national laboratories. Congress should also create a structure that ensures government research meets national objectives, and is accessible to the private sector for application to economically viable endeavors.

3. Eliminate LIHEAP

LIHEAP is meant to help low-income households with energy costs, energy crises, and home weatherization,⁸⁷ but it has rapidly expanded, is duplicative, and has been riddled with fraud and abuse. A 2010 Government Accountability Office (GAO) study found that the Department of Health and Human Services distributed funds to thousands of deceased and incarcerated people and claimed that LIHEAP application processors awarded funds to GAO officials using fake addresses and fake energy bills.⁸⁸ Eliminating LIHEAP certainly does not mean that there will be no money to help low-income households pay for energy costs. The federal government runs

85. Nicolas Loris, *Department of Energy Budget Cuts: Time To End the Hidden Green Stimulus*, THE HERITAGE FOUND. (Mar. 23, 2012), <http://www.heritage.org/research/reports/2012/03/department-of-energy-budget-cuts-time-to-end-the-hidden-green-stimulus>.

86. *Id.*

87. *About LIHEAP*, OFFICE OF CMTY. SERV., U.S. DEPT. OF HEALTH & HUMAN SERV., <http://www.acf.hhs.gov/programs/ocs/programs/liheap/about> (last visited April 9, 2013).

88. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-10-621, *LOW-INCOME HOME ENERGY ASSISTANCE PROGRAM: GREATER FRAUD PREVENTION CONTROLS ARE NEEDED 5-6* (2010), available at <http://www.gao.gov/new.items/d10621.pdf>.

more than seventy means-tested aid programs that provide cash for food, housing, medical care, and social services.⁸⁹ Total federal and state spending on means-tested assistance to low-income persons exceeded \$900 billion in 2011.⁹⁰ Furthermore, cash, food, housing, and energy aid are highly fungible when they reach the household level, so households are in the best position to determine which good they need most. Congress should eliminate LIHEAP funding entirely.

B. Tax Credits

By uniquely favoring one industry, special tax treatment can serve the same purpose as a subsidy, and it has been an increasingly attractive way for the government to award preferential treatment to certain energy industries. The number of energy tax programs expanded from eleven in 1999 to thirty-eight in President George W. Bush's 2007 budget.⁹¹ According to the EIA, tax expenditures comprise almost two-thirds of electricity subsidies.⁹² Ideally, Congress should immediately remove all distortionary energy tax policy—meaning any tax policy that singles out an industry—and offset those repeals with a broad tax cut. In order to wean industries off preferential treatment and to not pull the rug out from companies that built their business around the expectation of receiving a tax credit, Congress should create a three-year window for expiration of all energy tax expenditures. This should not include broadly available tax deductions that apply across multiple sectors.⁹³ Congress should not provide new targeted tax credits, should not extend sun-setting credits, should shorten the timeframe for which all targeted tax

89. Katherine Bradley & Robert Rector, *Confronting the Unsustainable Growth of Welfare Entitlements: Principles of Reform and Next Steps*, THE HERITAGE FOUND. (June 24, 2010), <http://www.heritage.org/research/reports/2010/06/confronting-the-unsustainable-growth-of-welfare-entitlements-principles-of-reform-and-the-next-steps>.

90. *Id.*

91. MOLLY SHERLOCK, CONG. RESEARCH SERV., R41227, ENERGY TAX POLICY: HISTORICAL PERSPECTIVES ON AND CURRENT STATUS OF ENERGY TAX EXPENDITURES 8-9 (2011).

92. ENERGY INFO. ADMIN., FEDERAL FINANCIAL INTERVENTIONS AND SUBSIDIES IN ENERGY MARKETS 2007 xi (2008), available at <http://www.eia.doe.gov/oiaf/servicerpt/subsidy2/pdf/subsidy08.pdf>.

93. For instance, some policymakers want to remove the manufacturer's tax deduction for the oil and gas industry under section 199 of the Internal Revenue Code, which applies to all domestic manufacturers, including windmill and solar-panel manufacturers. For more information, see Nicolas Loris & Curtis Dubay, *What's an Oil Subsidy*, THE HERITAGE FOUND. (May 12, 2011), <http://www.heritage.org/research/reports/2011/05/whats-an-oil-subsidy>.

credits are available, and should broadly lower the corporate income tax rate to prevent a tax increase.

1. No new tax credits

Congress should not implement any new tax credits for energy production, energy infrastructure, transportation (production and consumption), or energy-efficiency initiatives. This will prevent the federal government from continuing to pick winners and losers, and it will also ensure that Congress cannot use the tax code to direct investments.

2. Force sun-setting tax credits to sunset

One of the larger problems with targeted tax credits is that upon expiration, industry groups will lobby members of Congress to expand the credits for another year, or for multiple years. Congress should specify that any tax credit set to expire on December 31, 2013 cannot be extended and should be accompanied with an offsetting tax reduction.

3. Expedite sunseting

Congress should create a three-year window for all other tax credits that extend over multiple years or do not expire, and it should reduce the write-off percentage by one-third after each year. Any tax credit tied to production should follow the same schedule. This time frame will give industries a predictable window to lower costs and adjust to competition without federal aid. Congress should then reduce other taxes, such as the corporate income tax, by the amount of revenue that expediting the elimination of these unsound policies would raise.

C. Make Immediate Expensing Available for Everyone

Another way in which certain industries benefit over others relates to how companies can expense capital costs. For instance, oil and gas companies receive more generous treatment than other industries through expensing of intangible drilling costs.⁹⁴ A simple solution is to allow all companies, including oil and gas companies, to be able to expense their full capital costs immediately.

94. See INTERNAL REVENUE SERV., BUSINESS EXPENSES FOR USE IN PREPARING 2012 RETURNS (2013), available at http://www.irs.gov/publications/p535/ch07.html#en_US_2012_publink1000208883 (outlining deduction procedures for intangible drilling costs).

Immediate expensing allows companies to deduct the cost of capital purchases at the time they occur rather than deducting the costs over many years based on cumbersome depreciation schedules.⁹⁵ For instance, the Section 179 deduction in the Internal Revenue Code allows for immediate expensing of eligible property.⁹⁶ Immediate expensing for all new plant and equipment costs—for any industry or type of equipment—would allow newer equipment to come online faster, which would improve energy efficiency and overall economic efficiency.

D. Prevent and Remove Other Market Distortions

The government distorts the energy market in several other ways—through loan guarantees, insurance programs, mandates, tariffs on imported energy, and energy sales at below-market costs. To eliminate these distortions, Congress should remove loan guarantee programs, privatize public power administrations, and restructure insurance for energy projects.

1. Prohibit any new loan guarantees or other capital subsidy programs

The Energy Policy Act of 2005 (EPAAct 2005) included loan guarantees for nuclear power, and section 1705 of the ARRA amended EPAAct to include loans for renewable energy, biofuel projects, and electric power transmission systems that began construction before October 1, 2011.⁹⁷ Congress appropriated \$6 billion for the credit subsidy costs of the section 1705 loans.⁹⁸ A new capital subsidy program gaining some traction in Congress is to create a Clean Energy Deployment Administration within DOE, which would act as a “green bank,” providing loans, loan guarantees, and clean-energy-backed bonds to carbon-free technologies that

95. NAT'L FED'N OF INDEP. BUS., SMALL BUSINESS TAX RATES AND TAX COMPLEXITY (2013), available at <http://www.nfib.com/Portals/0/PDF/AllUsers/research/cribsheets/small-business-tax-rates-cribsheet.pdf>.

96. See INTERNAL REVENUE SERV., ELECTING THE SECTION 179 DEDUCTION (2013), available at http://www.irs.gov/publications/p946/ch02.html#en_US_2012_publink1000107394 (listing eligible property for deduction).

97. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified in scattered sections of 42 U.S.C.).

98. U.S. DEP'T OF ENERGY, INNOVATIVE TECHNOLOGY LOAN PROGRAM 2 (2011), available at http://energy.gov/sites/prod/files/edg/recovery/documents/Innovative__Technology_Loan_Guarantee_Program.pdf.

commercial lenders believe are too risky.⁹⁹ But the DOE has no role to play as a banker.¹⁰⁰ By subsidizing a portion of the actual cost of a project through a loan guarantee, the government is allocating resources away from more-valued uses to less-valued uses. In essence, these guarantees and loans direct labor and capital away from more competitive projects. This reduces the incentive for the energy investor or business to manage risk, innovate, and to increase efficiency, and it crowds out other innovative energy projects that do not receive loans. Venture capitalists are perfectly capable of making these investments and reaping the rewards from risk or suffering the losses from bad investments. Whether a company that receives a loan guarantee is profitable or insolvent, the program is a failure of a policy. No loan guarantee program should be expanded, nor should the government implement any new capital subsidy programs.

2. Restructure public power

Federal utilities, known as Power Marketing Administrations (PMAs), were set up to provide cheap electricity to rural areas.¹⁰¹ PMAs can sell electricity at below-market rates because of favorable financing terms—they receive federal tax exemptions and receive loans at below-market interest rates.¹⁰² Construction, rehabilitation, operation, and maintenance of PMAs are financed through the main DOE budget, offset collections, alternative financing, and a reimbursable agreement with the Bureau of Reclamation.¹⁰³ Furthermore, rural electric cooperatives (RECs) are private organizations, in many cases non-profits, that provide about twelve percent of the nation's electricity sales.¹⁰⁴ RECs receive special tax

99. Nicolas Loris & Jack Spencer, *The Department of Energy Should Not Be the Green Banker*, THE HERITAGE FOUND. (Oct. 6, 2011), <http://www.heritage.org/research/reports/2011/10/the-department-of-energy-should-not-be-the-green-banker>.

100. *Id.*

101. The DOE Power Marketing Administration is made up of the Southeastern Power Administration, the Southwestern Power Administration, the Western Area Power Administration, and Bonneville Power Administration. Department of Energy Offices. *See Offices*, DEP'T OF ENERGY, <http://energy.gov/offices> (last visited May 6, 2013) (listing the offices of members of the Power Marketing Administration).

102. U.S. ENERGY INFO. ADMIN., FEDERAL ENERGY MARKET INTERVENTIONS 1999: ENERGY TRANSFORMATION AND END USE 19, 22 (2000), available at <http://www.eia.gov/oiaf/servicert/subsidy1/pdf/sroiaf%282000%2902.pdf>.

103. *Id.* at 20.

104. NAT'L RURAL ELEC. COOP. ASS'N, CO-OP FACTS & FIGURES (2012), available at <http://www.nreca.coop/members/Co-opFacts/Documents/AnnualMeetingFactSheet.pdf>.

exemptions and low-interest loans from the government.¹⁰⁵ Congress should remove privileges for federal utilities, municipal power companies, and electricity cooperatives and, ultimately, sell off PMAs to private buyers.

3. Restructure insurance and risk mitigation

Several government programs offer liability-insurance schemes for specific industries. While some of these programs may have been justifiable in the past to protect private entities that engaged in high-risk operations in support of vital national interests, they now often serve to subsidize insurance costs for private, profit-seeking industries.¹⁰⁶ 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 structure for the nuclear industry that extends through 2025.¹⁰⁷ Given the high probability of at least some frivolous lawsuits in pursuit of unlimited damages, removing the cap entirely without implementing a new system would subject covered industries to punitively high costs. Instead, Congress should reform liability caps, including reforming the Price-Anderson Act when it expires, in a way that accurately assigns risk and liability to those engaged in covered activities.¹⁰⁸

4. Eliminate production mandates

When the federal tax credit for blending ethanol into gasoline and the fifty-four-cent-per-gallon tariff on imported ethanol expired, a diverse group of fiscal watchdogs, environmentalists, and free-trade proponents all hailed this as a major victory.¹⁰⁹ Though this was a move in the right direction, the real burden on consumers and the environment is that producers will continue to blend ethanol into

105. U.S. ENERGY INFO. ADMIN., *supra* note 84, at 22, 25.

106. Anthony Heyes, *Determining the Price of Price-Anderson*, 25 REGULATION 26, 30 (Winter 2002–03), available at <http://www.cato.org/sites/cato.org/files/serials/files/regulation/2002/10/v25n4-8.pdf>.

107. See Oil Pollution Act of 1990, 33 U.S.C. § 2704 (2006); Atomic Energy Act of 1954, 42 U.S.C. § 2210 (2006).

108. For a comprehensive solution to offshore oil-spill liability, see Nicolas Loris, Jack Spencer & James Carafano, *Oil Spill Liability: A Plan for Reform*, THE HERITAGE FOUND. (Aug. 2, 2010), <http://www.heritage.org/research/reports/2010/08/oil-spill-liability-a-plan-for-reform>.

109. Nicolas Loris, *Two Cheers for Ethanol Subsidies Expiring—But Costly Mandate Remains*, THE HERITAGE FOUND. (Jan. 17, 2012), <http://www.heritage.org/research/reports/2012/01/ethanol-subsidies-expiring-but-the-costly-mandate-remains>.

gasoline—because they are federally required to do so. EPA 2005 contained the first-ever requirement that renewable fuels be mixed into the gasoline supply.¹¹⁰

The 2007 Energy Independence and Security Act (EISA) substantially increased the mandated amount of renewable fuel required to be blended into transportation fuel to 36 billion gallons by 2022. EISA mandated that 250 million gallons of cellulosic ethanol be blended into gasoline in 2011 and 500 million gallons be blended in 2012.¹¹¹ Thus far, zero gallons have been produced, because no companies have been able to produce commercially viable cellulosic ethanol.¹¹² As a result, refiners had to pay more than \$6 million in waiver credits or surcharges to comply with the EPA's minimum volume requirements.¹¹³ Undoubtedly, refiners then pass these costs to the consumers. The EPA ratcheted down its goal for cellulosic biofuel production in 2012 to 8.65 million gallons—less than 2 percent of the original goal.¹¹⁴ The fact that cellulosic ethanol production is nowhere near providing industrial-scale quantities of fuel demonstrates the government's inability to determine what is commercially viable and beneficial for consumers.

V. THE CURIOUS TASK

Austrian economist Friedrich Hayek wrote in *The Fatal Conceit* that “[t]he curious task of economics is to demonstrate to men how little they really know about what they imagine they can design.”¹¹⁵ For far too long, politicians have unsuccessfully attempted to demonstrate their ability to design and control the energy economy. The direct consequences, the unintended consequences, and the harmful effects on taxpayers, consumers, and the economy broadly

110. See Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (codified in scattered sections of 42 U.S.C.).

111. Energy Independence and Security Act of 2007, Pub. L. No. 110–140, 121 Stat. 1492 (codified in scattered sections of 42 U.S.C.).

112. Matthew Wald, *A Fine for Not Using a Biofuel That Doesn't Exist*, N.Y. TIMES (Jan. 9, 2012), http://www.nytimes.com/2012/01/10/business/energy-environment/companies-face-fines-for-not-using-unavailable-biofuel.html?_r=0.

113. *Fuels and Fuel Additives 2012 RFS2 Data*, ENVTL. PROT. AGENCY, <http://www.epa.gov/otaq/fuels/rfsdata/2012emts.htm> (last updated Apr. 7, 2013); Jenny Mandel, *Refiners Protest EPA's "Ridiculous" Cellulosic Targets*, GREENWIRE (June 22, 2011), <http://www.eenews.net/public/Greenwire/2011/06/22/5>.

114. Regulation of Fuels and Fuel Additives: 2012 Renewable Fuel Standards, 77 Fed. Reg. 1320, 1320–1358 (Jan. 9, 2012) (to be codified at 40 C.F.R. pt. 80).

115. FRIEDRICH HAYEK, *The Fatal Conceit*, in THE COLLECTED WORKS OF F.A. HAYEK 76 (W.W. Bartley III ed., 1988).

should serve as a wake-up call to free the market from distortions created by privileged treatment from the government. The discussion over the wind PTC extension provides valuable context to the larger energy-subsidy debate, and the same logic applied in this Article applies not only to the energy sector but to most sectors of the American economy. The task of preventing and removing subsidies from the energy economy is extremely difficult, but it is necessary.