

BACKGROUND

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Allow Energy Tax Credits to Expire

Nicolas D. Loris and Katie Tubb

Abstract

Two dozen technology-specific, energy-related tax provisions expire at the end of 2016. Instead of addressing each of these tax provisions on its own merit, Congress has traditionally manufactured crises around deadline events, such as the ending fiscal year, to justify moving them all forward in one package of tax extenders. Energy tax provisions slated to expire this year would divert at least \$7.8 billion in tax dollars if renewed for another year. Subsidies do not make energy resources and technology less expensive; they just make more people—namely, taxpayers—pay for them. America has a diverse energy sector, and the market incentive to supply affordable electricity and competitive transportation fuels is enough to spur private investment without any preferential treatment from the federal government. Such treatment has costly unintended consequences on energy markets and Americans' choices. The only way to truly level the playing field is to eliminate all targeted subsidies for every energy resource. Congress should allow the energy-related tax credits to expire at the end of the year and eliminate all targeted tax credits for all energy sources and enable free enterprise to drive energy investments.

Two dozen technology-specific, energy-related tax provisions expire at the end of 2016, including subsidies in the form of tax credits for coal, natural gas, renewable energy, and energy efficiency.¹ By transferring the tax burden from these politically connected industries to everyday Americans, Washington is not only increasing unfairness in the tax code but also distorting the marketplace, which results in economic inefficiency and technological stagnation.

This paper, in its entirety, can be found at <http://report.heritage.org/bg3164>

The Heritage Foundation
214 Massachusetts Avenue, NE
Washington, DC 20002
(202) 546-4400 | heritage.org

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KEY POINTS

- Targeted tax measures distort market decisions by prioritizing subsidized investments over others that may provide more reliable service to customers. Targeted tax measures invite government manipulation of markets and encourage government dependence. Tax credits meant to last only a few years just to get an emerging technology off the ground become permanent parts of the tax code.
- For well over two decades, advocates of subsidies for renewables and energy-efficient products have been saying that these technologies are cost-competitive and save consumers money. However, if these products are competitive, they should not need government help to penetrate the market.
- Most of the energy tax credits should be allowed to expire. The only way to level the playing field is to eliminate all targeted subsidies for every energy resource. Neutral, pro-growth tax policies like immediate expensing and accelerated depreciation should remain until broader reform is made.

Instead of addressing each tax provision on its own merits, Congress has traditionally manufactured crises around deadline events, such as the close of the fiscal year, to justify moving all the provisions forward in one package of tax extenders.² A better approach would be to simply allow the credits to expire and thus prevent the diversion of tens of billions of taxpayer dollars to energy companies that cater more to the preferences of politicians, academics, and special interests than to the needs of the marketplace.³

However, not all of the tax policies currently under consideration are bad policies. Those that lower the tax burden generally for all industries should be extended or made permanent. For example, absent a reform to establish immediate expensing for all capital investment, provisions for accelerated depreciation schedules should be extended. Ultimately, Congress should pursue tax reform that lowers rates broadly and avoid using the tax code to pick winners and losers. Doing so is best for the energy sector to realize its potential and to grow the economy broadly.

Tax Credits Expiring at the End of 2016

Using the tax code to encourage energy development dates back more than a century. Even the tax credits for so-called emerging technologies and energy sources are several decades old.⁴ For instance, Congress first enacted the wind production tax credit in 1992 and the solar investment tax credit, as it is known today, in 2005, although similar solar tax credits go back to 1978. Congress is also discussing whether to extend tax credits for hybrid solar lighting systems, fuel cells, geothermal, biomass, combined heat and power systems, and small wind power. Extension proponents claim that the subsidies were mistakenly left out of last year's tax extenders bill, which included five-year extensions and expansion of the wind production tax credit and

solar investment tax credit. Regardless of whether the omission of these subsidies was intentional, it was a small piece of good news for the tax code, the American people, and free enterprise, as the government's use of the tax code to pick winners and losers has many harmful economic effects on American families and businesses. Table 1 shows the energy-related tax credits set to expire at the end of the year. If renewed for another year, these credits would divert at least \$7.8 billion in tax dollars. Subsidies do not make energy resources and technology less expensive; they just make more people—namely, taxpayers—pay for them.

Energy Markets Are Diverse and Competitive Without Special Government Treatment

The U.S. already has a diverse, competitive energy market to meet its energy needs. The market currently includes coal, oil, natural gas, nuclear, hydroelectric, wind, solar, biofuels, battery, and geothermal power. Ample opportunity exists for new, innovative technologies to enter the market. Each year Americans collectively spend hundreds of billions of dollars on energy needs. Combining residential and transportation expenditures, energy expenditures per person exceeded \$3,000 in 2012.⁵ The market incentive to supply affordable electricity or a competitive transportation fuel is enough to spur private investment without any preferential treatment from the federal government.

Using the tax code to drive energy revolutions ignores how energy markets really work. As prices change, so does private investment. With gas price fluctuation, for instance, private investments can develop an economically viable alternative to the internal combustion engine, such as electric vehicles, or new sources of a transportation fuel may emerge, like biofuels or natural gas. Increase in prices also incentivizes increased oil production.

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1. Joint Committee on Taxation, "List of Expiring Federal Tax Provisions 2016-2025," U.S. Congress, January 8, 2016, <https://www.jct.gov/publications.html?func=startdown&id=4862> (accessed October 10, 2016).
 2. Curtis Dubay, "The Senate Can Use Tax Extenders as an Opportunity to Improve the Tax Code," Heritage Foundation *Issue Brief* No. 4437, July 28, 2015, <http://www.heritage.org/research/reports/2015/07/the-senate-can-use-tax-extendere-as-an-opportunity-to-improve-the-tax-code>.
 3. Molly F. Sherlock and Jeffrey M. Stupak, "Energy Tax Policy: Issues in the 114th Congress," Congressional Research Service *Report for Congress* No. 43206, June 15, 2016, <https://www.fas.org/sgp/crs/misc/R43206.pdf> (accessed October 10, 2016).
 4. Salvatore Lazzari, "Energy Tax Policy: History and Current Issues," Congressional Research Service *Report for Congress* No. 33578, June 10, 2008, <https://www.fas.org/sgp/crs/misc/RL33578.pdf> (accessed October 10, 2016).
 5. U.S. Department of Energy, "How Much Do You Spend?" <http://energy.gov/articles/how-much-do-you-spend> (accessed October 12, 2016).

The dynamic flow of investments and consumer behavior is best determined by the marketplace, not politicians trying to predict or outsmart the market. Private companies will make investments with better foresight than the government, whose policies are typically reactionary. In terms of energy policy and the energy market, the government's role should be limited to opening access to resource development, reducing the regulatory burden for all energy sources, and eliminating all forms of preferential treatment.

Tax Credits Distort Energy Markets

Tax credits for specific technologies distort energy markets. For example, the wind production tax credit Congress extended again last year enables wind-electricity producers to *pay* distributors to take their electricity and yet still make a profit. When selling the electricity to grid operators, the producers can underbid other electricity producers in times of excess supply because wind-electricity producers can depend on \$22 per megawatt hour generated from the tax credit.

The tax credits have adverse impacts on the electricity sector in both the near and long term. In the near term, electricity markets are skewed to prioritize subsidized wind over other resources that may provide more reliable, efficient, and dispatchable electricity to consumers. Because wind and solar are intermittent sources of energy, integrating them into the grid is difficult and costly for power grid operators, who are constantly trying to balance supply and demand. In the intermediate to long run, the tax credits undercut electricity markets, making it difficult for otherwise affordable and reliable nuclear, coal, or natural gas power plants in particular to compete.

In fact, several successful nuclear power plants have closed in recent months even as years remain on their operating licenses. Although a number of factors are at play in these closures, including inexpensive natural gas,⁶ state and federal subsidies to renewables in particular have spread the costs of wind and solar power across all taxpayers with the unintended consequence of making other

long-term investments in resources like nuclear power unaffordable.

Tax Credits Invite Government Interference and Foster Government Dependence

The government's use of the tax code to promote one technology over another distorts private-sector investments. Private capital is limited. Technologies that do not receive subsidies appear more expensive, risky, or unpromising. In shifting the financial risk of energy projects through the tax code, the government is discouraging private investments in projects that lack the government's blessing but may have more commercial promise. A dollar invested in a company benefiting from a tax credit cannot simultaneously be invested in another company, creating opportunity costs where potentially promising but unsubsidized technologies may not receive investment.

Moreover, targeted tax credits provide one technology a government-created price advantage over a non-credited competing technology. Companies that do not receive any preferential treatment consequently will lobby for one, demanding a level playing field. The end result is a hodgepodge of tax credits that benefit select technologies that Members of Congress support because it particularly benefits their district or state. The only way to actually level the playing field is to eliminate all sources of subsidies for all forms of energy.

Further, a business model built around taxpayer-funded subsidies distorts the incentives that drive innovation. Preferential tax treatment reduces the necessity for an industry to make its technology cost-competitive because the tax credit shields a company from recognizing the actual price at which its technology is economically viable. Less competitive companies make up part of an artificially inflated industry which shrinks according to actual market demand once a tax credit expires, as evidenced when the wind production tax credit expired several times.⁷ For profitable companies, a tax credit only serves to pad their bottom line. Even if a company does not claim the need for more tax credits,

6. Jack Spencer, "More to the Story on Nuclear Power and Cheap Natural Gas," *The Daily Signal*, March 16, 2012, <http://dailysignal.com//2012/03/16/more-to-the-story-on-nuclear-power-and-cheap-natural-gas/>.

7. U.S. Energy Information Administration, "Wind Energy Tax Credit Set to Expire at the End of 2012," November 21, 2012, <http://www.eia.gov/todayinenergy/detail.php?id=8870> (accessed October 10, 2016).

its refusal to accept them would put it at a competitive disadvantage.⁸ As a result, an industry is pulled down to the lowest common denominator and tax credits promised to only last a few years to get an emerging technology off the ground become a permanent part of the tax code.

If Alternative Energy Technologies Are Competitive, Why Is Special Treatment Necessary?

Those who advocate a shift away from using hydrocarbons often argue that renewable technologies are cost-competitive. In fact, the Department of Energy recently published several charts that show the costs of wind, solar, and electric vehicles, as well as light emitting diodes (LEDs), as “becoming increasingly cost competitive” with conventional fuels.⁹ Consumers have been told this for well over two decades.¹⁰ However, if alternative energy sources are cost-effective, they should not need help from the federal government to enter the market.

Similarly, champions of energy-efficiency mandates, regulations, and subsidies claim that families and businesses will save money by installing more energy-efficient windows, using energy-saving building materials, or buying more energy-efficient appliances. Families and businesses will make energy-saving investments without government-provided incentives, because when the savings outweigh the costs, families secure reduced energy bills and businesses gain a competitive advantage.¹¹

Make Immediate Expensing Permanent for All Investment

Unlike targeted tax credits, some pro-growth tax policies do reward economic growth in a neutral

way. Two policies—expensing and depreciation—are properly addressing all capital expenditures with immediate expensing and shorter depreciation schedules until full expensing becomes permanent.

- **Immediate expensing** allows companies to deduct the cost of capital purchases at the time they occur rather than deducting that cost over many years based on cumbersome depreciation schedules.

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.

- **Depreciation** raises the cost of capital and discourages companies from hiring new workers and increasing wages for existing employees.

Shorter depreciation schedules permit businesses to recover the costs of capital sooner, although Congress should replace depreciation schedules with immediate expensing provisions to optimize investment without meddling with the tax code.

President Obama has championed temporary 100 percent immediate expensing for qualified capital because it reduces the tax bias against investment.¹² Congress should make immediate full expensing permanently available for all business investments. Until that takes effect, Congress should retain all provisions that move the tax code in the direction of expensing.

8. Katie Tubb, “Solar’s Future Is Brighter Without Investment Tax Credit,” Heritage Foundation *Issue Brief* No. 4499, December 15, 2015, <http://www.heritage.org/research/reports/2015/12/solars-future-is-brighter-without-investment-tax-credit>.

9. Daniel Wood, “6 Charts that Will Make You Optimistic About America’s Clean Energy Future,” U.S. Department of Energy, September 28, 2016, <http://energy.gov/articles/6-charts-will-make-you-optimistic-about-america-s-clean-energy-future> (accessed October 10, 2016).

10. Matthew L. Wald, “A New Era for Windmill Power,” *The New York Times*, September 8, 1992, <http://www.nytimes.com/1992/09/08/business/a-new-era-for-windmill-power.html?pagewanted=all> (accessed October 10, 2016).

11. Katie Tubb, Nicolas D. Loris, and Paul J. Larkin, Jr., “The Energy Efficiency Free Market Act: A Step Toward Real Energy Efficiency,” Heritage Foundation *Background* No. 3144, August 17, 2016, <http://www.heritage.org/research/reports/2016/08/the-energy-efficiency-free-market-act-a-step-toward-real-energy-efficiency>.

12. U.S. Department of the Treasury, Office of Tax Policy, “The Case for Temporary 100 Percent Expensing: Encouraging Business to Expand Now by Lowering the Cost of Investment,” October 29, 2010, https://www.whitehouse.gov/sites/default/files/Expensing_Report.pdf (accessed October 18, 2016).

Allowing Energy Credits to Expire Is a Step in the Right Direction

Simply doing nothing and allowing the energy-related tax credits to expire at the end of the year will take energy policy and the tax code in the right direction. When politics are removed from the equation, American businesses and families are free to make the energy choices that best suit their needs. Congress should eliminate all targeted tax credits for all energy sources, including hydrocarbons and nuclear, and enable free enterprise to drive energy investments.

—*Nicolas D. Loris* is Herbert and Joyce Morgan Research Fellow and *Katie Tubb* is a Policy Analyst in the Thomas A. Roe Institute for Economic Policy Studies, of the Institute for Economic Freedom and Opportunity at The Heritage Foundation.

TABLE 1

Energy Tax Credits (Page 1 of 3)

Tax Credit	Description	One-Year Cost (millions)
WIND, SOLAR, GEOTHERMAL, AND OTHER RENEWABLES		
Residential energy property (§25D(g))	30 percent of the costs including installation for solar, wind, geothermal, and fuel cell products (up to \$500 per half kilowatt for fuel cell products)	\$1,100
Beginning-of-construction date for non-wind renewable power facilities eligible to claim the electricity production credit or investment credit in lieu of the production credit (§45(d) and §48(a)(5))	30 percent investment tax credit or a production tax credit for the first 10 years of service of 2.3 cents per kWh for open-loop biomass and geothermal, or 1.2 cents for closed-loop biomass, small irrigation, landfill gas, municipal solid waste, certain hydropower, marine, and hydrokinetic power facilities	169.5
Hybrid solar lighting system property (§48(a)(3)(A)(ii))	30 percent business investment tax credit for hybrid solar lighting systems—roof units that channel sunlight into a building	n/a
Geothermal heat pump property, small wind property, and combined heat and power property (§48(a)(3)(A)(vii), §48(c)(4), and §48(c)(3)(A)(iv))	10 percent business investment tax credit for geothermal energy heat pumps (no expiration date on all other property and equipment), 30 percent business investment tax credit for small wind turbines (up to 100 kW capacity), and 10 percent business investment tax credit for energy efficient or biomass combined heat and power	n/a
Five-year cost recovery for certain energy property (§168(e)(3)(B)(vi)(I) and §48(a)(3)(A))	Five-year accelerated depreciation for investments in small wind, geothermal, fuel cells, some solar, and biomass energy and illumination	n/a
Qualified fuel cell and stationary microturbine power plant property (§48(c)(1)(D) and §(c)(2)(D))	30 percent business investment tax credit for fuel cells up to \$1,500 per kW, and 10 percent business investment tax credit for microturbines (up to two megawatts) capped at \$200 per kW capacity	n/a
ENERGY EFFICIENCY		
Certain nonbusiness energy property (§25C9(g))	Ten percent of residential energy efficiency purchases up to \$500 total (such as solar-powered water heaters, and energy-efficient windows, doors, roofs, and HVAC) put in place by December 31, 2016	\$1,331
Construction of new energy-efficient homes (§45L(g))	Up to \$2,000 for builders of homes meeting energy efficiency and savings requirements or that meet ENERGY STAR requirements	500
Energy-efficient commercial buildings deduction (§179D(h))	Tax deduction up to \$1.80 per square foot for energy-efficient property (lighting systems, building envelope, HVAC, ventilation, or hot water systems) in a commercial building to reduce energy consumption	362

TABLE 1

Energy Tax Credits (Page 2 of 3)

Tax Credit	Description	One-Year Cost (millions)
BIOFUELS AND ALTERNATIVE FUELS		
Qualified fuel cell motor vehicles (§30B(k)(1))	\$4,000 to \$40,000, depending on weight, for a fuel cell vehicle purchased before January 1, 2017	\$6
Alternative vehicle refueling property (§30C(g))	30 percent credit for refueling equipment for hydrogen, electricity, biodiesel, and other alternative fuels, up to \$1,000 for individuals or \$30,000 for businesses	105
Two-wheeled plug-in electric vehicles (§30D(g)(3)(E)(ii))	Ten percent of the cost up to \$7,500 for battery-powered road vehicles like electric motorcycles.	4
Second-generation biofuel producer credit (§40(b)(6)(J))	Up to \$1.01 per gallon of second-generation biofuel (such as algae or wood-based fuels) that is sold or used to produce second-generation biofuel	45
<i>Incentives for biodiesel and renewable diesel:</i>		2,563
Income tax credit for biodiesel fuel, biodiesel used to produce a qualified mixture, and small agri-biodiesel producers (§40A)	\$1.00 per gallon of delivered or used 100 percent biodiesel or agri-biodiesel fuel	
Income tax credit for renewable diesel fuel and renewable diesel used to produce a qualified mixture (§40A)	\$1.00 per gallon of delivered or used 100 percent renewable diesel fuel	
Excise tax credit and outlay payments for biodiesel fuel mixtures (§6426(c)(6) and §6427(e)(6)(B))	\$1.00 per gallon incentive of biodiesel or agri-biodiesel mixed into petroleum diesel to at least a 0.1 percent mix	
Excise tax credit and outlay payment for renewable diesel fuel mixtures (§6426(c)(6) and §6427(e)(6)(B))	\$1.00 per gallon incentive of renewable biodiesel mixed into petroleum diesel to at least a 0.1 percent mix	
Special depreciation allowance for second-generation biofuel plant property (§168(l))	Five-year depreciation schedule plus an additional 50 percent deduction in the first year for in-service second generation biofuel plants	7
<i>Incentives for alternative fuel and alternative fuel mixtures:</i>		916
Excise tax credit and outlay payments for alternative fuel (§6426(d)(5) and §6427(e)(6)(C))	\$0.50 per gallon of certain alternative fuels sold or used, such as CNG, LNG, or coal-to-liquid fuels	
Excise tax credit for alternative fuel mixtures (§6426(e)(3))	\$0.50 per gallon of alternative fuel blends (such as CNG or LNG) with gasoline, diesel, or kerosene	

TABLE 1

Energy Tax Credits (Page 3 of 3)

Tax Credit	Description	One-Year Cost (millions)
CONVENTIONAL ENERGY		
Mine rescue team training credit (§45N)	20 percent or up to \$10,000 for mine rescue employee training	\$3
Election to expense advanced mine safety equipment (§179E(g))	50 percent deduction of the cost of advanced mine safety equipment in the year put in service, such as emergency communication technology or comprehensive air quality monitoring systems	23
Special rule for sales or dispositions to implement Federal Energy Regulatory Commission or state electric restructuring policy (§451(i))	Option for electric utilities to recognize gains over eight years from transmission sales which are used to invest in the producing, transmitting, distributing, or selling of electricity or natural gas	645
Special rate for qualified timber gains (§1201(b))	Corporate tax rate of 23.8 percent on timber gains from harvests of timber owned more than 15 years	36

NOTES: Costs are for one calendar year. For costs labeled as “n/a,” JCT provided no data. Cost for the non-wind renewable power facilities credit is an average over 2018–2025.

SOURCES:

TAX CREDITS:

- Joint Committee on Taxation, “List of Expiring Federal Tax Provisions 2016-2025,” JCX-1-16, January 8, 2016, <https://www.jct.gov/publications.html?func=startdown&id=4862> (accessed October 18, 2016).

COSTS:

- Joint Committee on Taxation, “Estimated Revenue Budget Effects of Division Q of Amendment #2 to the Senate Amendment to H.R. 2029 (Rules Committee Print 114-40), The “Protecting Americans From Tax Hikes Act of 2015,” JCX-143-15, December 16, 2015, <https://www.jct.gov/publications.html?func=startdown&id=4860> (accessed October 18, 2016).
- Joint Committee on Taxation, “Technical Explanation, Estimated Revenue Effects, Distribution Analysis, and Macroeconomic Analysis of the Tax Reform Act of 2014: A Discussion Draft of the Chairman of the House Committee on Ways and Means to Reform the Internal Revenue Code,” JCS-1-14, November 18, 2014, <https://www.jct.gov/publications.html?func=startdown&id=4674> (accessed October 18, 2016).