

Energy Efficiency: Can Tax Incentives Reduce Consumption?

Statement of Chris Edwards, Director of Tax Policy Studies, Cato Institute

before the
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Subcommittee on Energy, Natural Resources, and Infrastructure

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Mr. Chairman and members of the committee, thank you for inviting me to testify today regarding energy efficiency and the federal tax code.

Additional tax incentives, such as tax credits, probably could reduce U.S. energy consumption modestly.¹ However, narrow incentives complicate the tax code, create distortions that reduce growth, and move down the slippery slope of widespread social engineering through the tax system.

On the other hand, Congress should reform tax provisions that hinder new investments in energy production and conservation. Current business depreciation rules for energy and conservation investments are unfavorable compared to the rules in other countries. Congress should reform those rules, and it should pursue broader tax reforms to spur more rapid replacement of older structures and equipment with newer, more energy efficient infrastructure throughout the economy.

Investment, Consumption, and the Income Tax

Policymakers have long considered major reforms to the federal tax system. Some favor a broad-based consumption tax, while others favor a broad-based (or Haig-Simons) income tax. The difference between the two is the treatment of savings and investment. Consumption taxes apply one layer of tax to savings and investment, while income taxes apply two layers. The current federal “income tax” is a hybrid between the two systems.

Reforms to move the current tax code toward a consumption-based system dovetail with the goals of those concerned about America’s energy future. A consumption tax would limit current consumption, including energy consumption, while removing tax barriers to investment—including investment in energy production, energy technologies, and energy conservation. As discussed below, more favorable depreciation rules would be an important step in a consumption tax direction.

Rising Tax Complexity

The federal tax system has become enormously complicated in recent years. The anti-investment bias and high tax rates under the current system have encouraged the

proliferation of narrow loopholes and special preferences. There seems to be more interest on Capitol Hill these days in creating new tax credits than in simplifying the tax code to provide fair and equal treatment of all taxpayers.

By contrast, during the 1980s there was bipartisan agreement that the tax code should be reformed to have a broad and neutral base with low rates. One congressional leader on tax reform at the time, Richard Gephardt (D-MO), noted in 1985:

The main argument for tax reform, I believe, is to achieve greater efficiency in the way the tax code works. When Congress gets into the business of figuring out \$370 billion of tax breaks a year, the House Ways and Means Committee and the Senate Finance Committee really are put in the business of trying, at least partially, to plan the American economy. . . . I confess that I am not qualified to act as a central planner and I do not know anybody on either committee who is.²

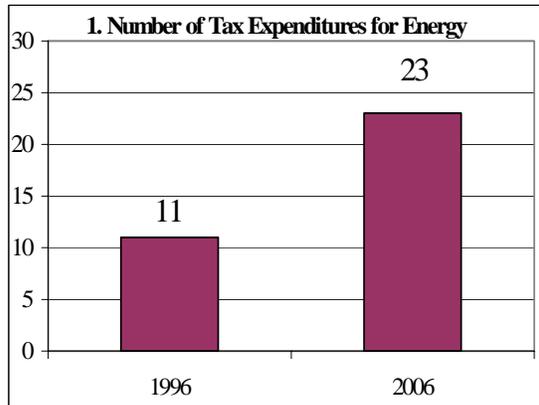
The Reagan administration held similar views about tax reform. The Congressional Research Service noted that the administration

opposed using the tax law to promote oil and gas development, energy conservation, or the supply of alternative fuels. The idea was to have a more neutral and less distortionary energy tax policy, which economic theory predicts would make energy markets work more efficiently and generate benefits to the general economy.³

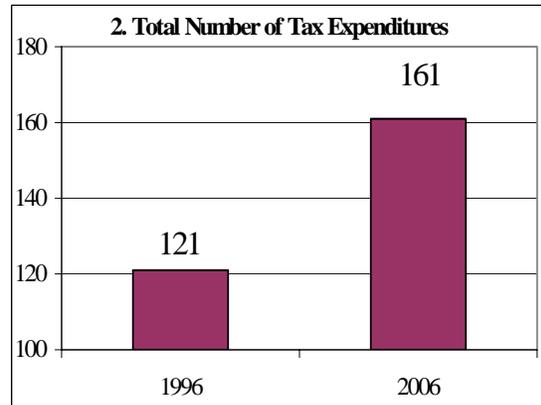
The two parties came together and agreed on the landmark Tax Reform Act of 1986, which ended many narrow tax breaks and reduced rates.⁴ Unfortunately, “central planning” through the tax code has come back into vogue since then. The number of pages in the federal tax code, regulations, and related rules has increased from 40,500 in 1995 to 67,204 in 2007, an increase of two-thirds.⁵

The number of narrow provisions, or loopholes, in the tax code is rising. Figures 1 and 2 show the number of “tax expenditures” in the income tax, based on data from the Office of Management and Budget.⁶ The number of tax expenditures for energy jumped from 11 to 23 between 1996 and 2006. The total number of tax expenditures increased from 121 in 1996 to 161 in 2006.

There are problems with these measures of tax expenditures. Some items, such as accelerated depreciation, are counted as loopholes under the income tax. But such pro-investment provisions would not be considered loopholes under a consumption tax. Nonetheless, the OMB’s tally of tax expenditures shows that Congress is moving away from the ideal of a neutral tax base toward micromanagement of the economy.



Source: Office of Management and Budget.



Source: Office of Management and Budget.

The rising number of narrow provisions in the tax code reduces economic efficiency. Such provisions distort market price and profit signals, which redirects capital and labor into less productive uses. That's why a tax code with a neutral base and low rates is preferable to one with narrow carve-outs and high rates. The economic cost of today's Swiss cheese tax base is large. U.S. output would be substantially higher if the tax base were reformed and effective tax rates across industries were equalized and reduced.⁷

Rising tax code complexity also

- Creates high compliance costs for record keeping, tax filing, and learning tax rules.
- Causes frequent tax filing errors by taxpayers and the Internal Revenue Service.
- Impedes economic decisionmaking by confusing taxpayers. Many taxpayers do not understand the tax rules for education incentives, retirement savings, and other items.⁸
- Promotes an invasion of privacy by the government. With special breaks, such as those for education and energy, the IRS needs to hunt for volumes of added documentation to carry out its enforcement activities.

Going forward, creating new tax incentives for energy and conservation would exacerbate these complexity problems. New tax incentives would add to the paperwork burden, create more errors in tax administration, further confuse economic decisionmaking, and provide further reason for the IRS to dig into personal affairs.

Pandora's Box

Current federal tax incentives for energy and conservation are not large. Total income tax expenditures for these items are valued at just \$7 billion in 2007.⁹ That represents just 0.3 percent of total federal revenues. Thus, the discussion about tax incentives for energy and conservation is not a discussion about how high federal taxes ought to be.

Instead, the important issue for policymakers is to consider the sort of tax code that America ought to have. Should we have a tax code that treats families and businesses as equally as possible? Or should we have a tax code full of special provisions that treat

people differently as Congress micromanages family and business decisions? I favor the former. After all, equality under the law is a bedrock American principle.

Proponents of tax incentives no doubt think that their favored activities deserve special attention. Many energy and environmental analysts argue that federal tax policies should be used to fix “externalities” in energy markets.¹⁰ But such an approach risks opening a Pandora’s box of widespread social engineering through the code.

Many interest groups, such as those promoting education, housing, and scientific research, argue that their favored activities are subject to externalities that need special tax code treatment. But, in theory, there are an endless number of externalities that governments could meddle in. At the risk of promoting bad ideas, tax lobbyists could champion tax credits for

- *Obesity.* This is a serious and growing problem that imposes negative externalities on nonobese Americans through the health system and elsewhere. How about a tax credit for membership costs at Gold’s Gym?
- *Neighborhood Beautification.* Neat lawns and abundant greenery create positive externalities for neighborhoods. How about a tax credit for tree planting?
- *Guns.* Some analysts say that if more households owned guns it would reduce crime through deterrence. How about a tax credit for gun ownership because of this safety externality?

I’m not advocating these tax credits, but they illustrate the slippery slope of social engineering if Congress wanted to fix every externality through the tax code. Just this year, the CRS finds that more than 150 bills on energy efficiency and renewable energy have been introduced, with many proposing narrow tax breaks. I hope Congress resists the temptation to create more tax loopholes.

Conservation and Competitive Markets

The Congressional Research Service noted that the “Reagan administration believed that the responsibility for commercializing conservation and alternative energy technologies rested with the private sector and that high oil prices . . . would be ample encouragement for the development of alternative energy resources.”¹¹ I think Reagan got it right.

Competitive markets have made a huge contribution toward America’s energy security and conservation. Businesses, for example, have powerful market incentives to reduce energy consumption. They are relentless in cutting costs—labor costs, tax costs, production costs, fuel costs, heating costs, cooling costs, and lighting costs. Lower costs mean higher profits. That’s why businesses strive continually to improve efficiency, including energy efficiency, particularly in today’s competitive global economy.

Market forces are behind huge improvements in U.S. energy efficiency in recent decades. The amount of energy consumed for each unit of gross domestic product has fallen dramatically since the 1970s. Economist Gilbert Metcalf found that if U.S. energy

intensity were still at the level of 1970, the nation would be consuming 187 quadrillion BTUs annually.¹² Instead, the United States consumes just 98 quadrillion BTUs annually, and thus we have cut our energy intensity almost in half since 1970.

Some of this improvement stemmed from the changing structure of the U.S. economy. But Metcalf calculates that at least two-thirds of the improvements since 1970 came from rising energy efficiency. And much, perhaps most, of that I think is due to the natural competitive processes in the economy, not government policy.

Consider the rising energy efficiency of household appliances. Federal efficiency standards for appliances went into effect in 1990, and appliance efficiency has improved since then. But appliance efficiency also improved markedly between the early 1970s and 1990, apparently as a market response to rising electricity prices.¹³ The average energy consumption of U.S. refrigerators fell from 1,800 kWh per year in 1974 to just 800 kWh by 1990.

If Congress does not change efficiency standards or enact new tax credits for energy conservation, it seems likely that U.S. energy intensity will continue to fall in coming years due to natural market forces.

What Should Congress Do?

Congress can make tax policy reforms to improve energy efficiency. A first step would be to end any tax provisions that encourage excess energy consumption. A good example are the tax preferences for owner-occupied homes, which some economists think favor the acquisition of particularly large homes.¹⁴ Larger homes need more heating, cooling, and lighting. Thus, one reform would be to combine repeal of the mortgage interest deduction with marginal tax rate cuts.

Another avenue for reform would be to reduce the tax code's bias against capital investment. The income tax encourages current consumption and discourages long-term investment. To fix this bias, Congress should consider more favorable depreciation rules, optimally moving toward immediate expensing of capital purchases. That would remove barriers to all types of investments including those in energy production, alternative fuels, and conservation technologies. The Energy Policy Act of 2005 took some modest steps in this direction, but more could be done.¹⁵

Policymakers often say that America needs more job-creating investments in computers, automotive plants, transportation, and other activities. Those concerned with energy policy seek greater investment in electricity generation and transmission, oil refining, alternative fuels, pollution control, and conservation technologies. Thus, more favorable tax treatment of capital investment should be a common cause on Capitol Hill.

A new study by Ernst & Young and the American Council for Capital Formation shows that the current tax code stands in the way of energy and energy efficiency investments.¹⁶ The study compared U.S. cost recovery, or depreciation, rules to the rules in 11 other

countries for 11 types of energy investment. Faster write-offs of assets over shorter periods of time reduce effective tax rates on new investment.

The study found that the United States has less favorable tax rules than most other countries for investments in petroleum refining, electricity, pollution control equipment, electricity smart meters, and other items. Here are the results for capital cost recovery after the first five years of an investment:

- Nine of the 11 other countries had more favorable cost recovery for gas and nuclear electricity generation assets than the United States.
- Seven of the 11 other countries had more favorable cost recovery for oil refinery assets.
- Nine of the 11 other countries had more favorable cost recovery for pollution control equipment.
- Ten of the 11 other countries had more favorable cost recovery for electricity smart meters.

Consider electricity smart meters. If a U.S. utility installed these assets, it would take depreciation deductions worth 30 percent of the cost over the first five years. The comparable cost recovery values in other countries are Canada (63 percent), Germany (63 percent), Korea (58 percent), and Malaysia (90 percent).

America's less favorable depreciation rules combined with the industrial world's second-highest corporate tax rate creates a barrier to investment in new and traditional energy technologies. Because Congress is concerned with energy security, conservation, global warming, and high gasoline prices (partly caused by restricted refining capacity), it should focus on removing tax barriers to investment in energy production and energy efficiency.

Congress should consider reinstating the 50 percent capital expensing provisions that were in place in 2003 and 2004.¹⁷ That would spur economic growth while promoting the replacement of all types of older business assets with new, more efficient assets. New machines don't just replace similar old ones, they embody new technologies that increase economic and energy efficiency.

Thank you for holding these important hearings. I look forward to working with the committee on energy tax policy issues.

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¹ Kevin Hassett, "The Role of Tax Incentives in Energy Policy," American Enterprise Institute, July 10, 2001. For a history of federal tax incentives, see Chris Edwards, Ada Rousso, Peter Merrill, and Elizabeth

Wagner, "Cool Code: Federal Tax Incentives to Mitigate Global Warming," *National Tax Journal* 51, no. 3 (September 1998).

² Richard Gephardt, "The Economics and Politics of Tax Reform," *Cato Journal* 5, no. 2 (Fall 1985): 458.

³ Salvatore Lazzari, "Energy Tax Policy: History and Current Issues," Congressional Research Service, July 28, 2006, p. 5.

⁴ However, the 1986 Act had numerous anti-savings and anti-investment provisions.

⁵ This page count is based on CCH data. See Chris Edwards, "Income Tax Rife with Complexity and Inefficiency," Cato Institute Tax & Budget Bulletin no. 33, April 2006.

⁶ *Budget of the U.S. Government: FY2008, Analytical Perspectives*, p. 291.

⁷ The literature is summarized in Chris Edwards, "Options for Tax Reform," Cato Institute Policy Analysis no. 536, February 24, 2005.

⁸ CCH, "CompleteTax Survey Suggests Taxpayers Confused by Tax Code Complexity," March 16, 2005.

⁹ *Budget of the U.S. Government: FY2008, Analytical Perspectives*, p. 291.

¹⁰ For background on the history and purposes of federal energy policy, see Gilbert Metcalf, "Federal Tax Policy Towards Energy," National Bureau of Economic Research, Working Paper no. 12568, October 2006.

¹¹ Salvatore Lazzari, "Energy Tax Policy: History and Current Issues," Congressional Research Service, July 28, 2006, p. 5.

¹² Gilbert Metcalf, "Energy Conservation in the United States: Understanding Its Role in Climate Policy," National Bureau of Economic Research, Working Paper no. 12272, May 2006, p. 2. See also International Energy Agency, "The Experience with Energy Efficiency Policies and Programs in IEA Countries," August 2005.

¹³ Ronald Sutherland, "The High Costs of Federal Energy Efficiency Standards for Residential Appliances," Cato Institute Policy Analysis no. 504, December 23, 2003, p. 5.

¹⁴ The homeowner tax preference results from the combination of the mortgage interest deduction and the exemption from taxable income of imputed rent on homes.

¹⁵ For a discussion of the 2005 law and background on the depreciation of energy assets, see Gilbert Metcalf, "Federal Tax Policy Towards Energy," National Bureau of Economic Research, Working Paper no. 12568, October 2006.

¹⁶ Ernst & Young for the American Council for Capital Formation, "International Comparison of Depreciation Rules and Tax Rates for Selected Energy Investments," May 2, 2007.

¹⁷ For background, see Christopher House and Matthew Shapiro, "Temporary Investment Tax Incentives: Theory With Evidence from Bonus Depreciation," National Bureau of Economic Research, Working Paper no. 12514, September 2006.