

Energy Policy and Tax Reform

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Chairman Tiberi, Chairman Boustany, Ranking Member Neal, Ranking Member Lewis, and Members of the Subcommittees, thank you for inviting me to appear today to discuss energy policy and tax reform.

Lawmakers have used the tax code to influence energy markets for almost a century. Early efforts focused on promoting the development of domestic oil and gas resources. Following the energy crises of the 1970s, new tax incentives were created for alternative energy sources and energy efficiency. Lawmakers also introduced new taxes, for example the gas guzzler tax, to discourage energy use. In the 1980s, many tax incentives were reduced or eliminated, in part as a result of the Tax Reform Act of 1986, which sought to reduce the complexity and inefficiency of the tax code. Since then, new tax incentives have been introduced, with recent efforts promoting greater use of renewables and energy efficiency.¹

Because of ongoing concerns about climate change, energy security, and other risks associated with energy use, many observers believe that lawmakers should continue to use the tax system as a tool of energy policy. Some recommend tax breaks for domestic energy production. Some recommend incentives for cleaner ways of producing and using energy. And some recommend increasing existing taxes (e.g., on gasoline) or introducing new ones (e.g., on carbon emissions) to discourage energy use and its negative consequences.

* The views expressed here are my own; they do not necessarily reflect the views of the Urban Institute, its trustees, or its funders. Kim Rueben, Eric Toder, and Roberton Williams provided helpful comments, but all errors are my own.

¹ Sherlock (2011) reviews the history of energy tax policies.

Those suggestions come at a time of increased concern about the complexity and inefficiency of our tax system. Many observers have become skeptical of the way social and economic policies are implemented in the tax code. There is also rising concern about America's daunting fiscal outlook. For both reasons, there have been calls from across the political spectrum to cut back on tax preferences and use the resulting revenue to lower tax rates, reduce future deficits, or adopt some combination of the two.

As lawmakers consider such proposals, they will need to consider how tax reform, fiscal concerns, and energy policy interact. My testimony offers an economic framework for thinking about these interactions. I make seven main points:

1. Well-designed taxes can often address the negative effects of energy use at lower cost than subsidies can. One reason is that well-designed taxes make better use of market forces, while subsidies involve more government decision-making. Taxes can do a better job of leveling the playing field among competing energy technologies and involve less governmental picking of winners and losers.
2. Despite that advantage, policymakers have generally used the tax system to provide subsidies for energy activities they perceive as beneficial, rather than to impose additional costs on activities they deem harmful. Some of those subsidies are explicitly identified as supporting energy, while others are incorporated in broader business incentives.
3. That political preference for subsidies over taxes reflects three factors. First, tax subsidies are typically more popular with constituents than are higher taxes. Second, reducing the negative effects of energy use is not the only reason that policymakers enact energy tax policies. Some policymakers also want to support specific technologies and industries; that's easier to do with subsidies than taxes. Third, in recent years some policymakers have wanted to use energy subsidies to help stimulate America's weak economy.
4. Energy tax subsidies worsen the budget situation. To cover their costs, lawmakers must increase other taxes, cut spending, or run larger budget deficits. The revenue from energy and environmental taxes, in contrast, allows lawmakers to cut other taxes, increase spending, or reduce deficits.

5. Energy tax subsidies should be viewed as spending through the tax code, not as tax cuts. Reducing those subsidies would make the government smaller even though tax revenues, as conventionally measured, would increase.
6. The efficiency of tax subsidies depends on how they are designed. If policymakers want to use tax subsidies, they should favor those that reward success in accomplishing policy goals and that are as neutral as possible among technologies. They should also minimize needless uncertainty about the value of such subsidies.
7. Our tax system needs a fundamental overhaul; all provisions, including those related to energy, deserve close scrutiny to determine whether their benefits exceed their costs.

I elaborate on these points in the remainder of my testimony.

1. Well-designed taxes can typically address the negative effects of energy use at lower cost than can subsidies.

The primary rationale for applying special tax treatment to energy markets is that energy use imposes costs on society that aren't adequately reflected in private market transactions. The true cost of gasoline, for example, includes not only the private costs of production and distribution, but also the social costs of pollution and the risks of petroleum dependence. Tax policies can reduce those social costs by discouraging the activities that create them (e.g., by taxing gasoline) or by encouraging alternatives (e.g., by subsidizing alternative fuels).

Those two approaches have many similarities, but they are not identical. In general, well-designed tax policies are a more efficient way of reducing the negative effects of energy use. Taxes can take advantage of the full power of market forces while subsidies cannot. Subsidies thus tend to be less efficient and rely more on government decision-making.²

These differences are best illustrated with a simple example. Suppose that policymakers want to reduce emissions of carbon dioxide from electric power

² The reverse is true when private market activities have positive spillovers for society. In those cases, subsidies are typically more efficient than taxes. That's why policy experts often recommend subsidies for basic research (which generates a positive spillover in the form of new, shareable knowledge) and taxes to combat pollution.

plants. One strategy would impose a tax on all emissions of carbon dioxide by electric generators. That tax would then set in motion a multitude of market responses. Utilities would change how they dispatch their existing power plants; ones with high carbon emissions would run less often, while those with low emissions would run more often. Utilities would boost the efficiency of their existing fossil fuel generators, and would favor low-carbon generation options in their investment plans.

Utilities would also increase prices to electricity consumers, setting in motion demand responses. Consumers would use electricity more sparingly. Businesses and families would use less lighting, heating, and cooling. They would rely more on energy-efficient appliances and would put more insulation in their homes and offices. Businesses would focus more on the efficiency of motors and other electricity-using equipment. Appliance manufacturers would invest in research on new ways to reduce energy use.

And on and on. The miracle of the marketplace is that a single tax on carbon emissions will set in motion a seemingly infinite number of responses as families and businesses adjust their behavior to economize on electricity use and carbon emissions. This isn't a flawless process—the markets for both electricity and energy efficiency have imperfections—but it does harness a remarkable array of incentives to achieve the social goal of reducing carbon emissions.

An alternative strategy would offer a subsidy for activities that reduce carbon dioxide emissions from power plants. The best subsidy would be one that rewards people for reducing emissions below the level that would otherwise have occurred. Unfortunately, it's impossible to implement such a subsidy; there is no way for the government to know what emissions would have been.

Lawmakers must therefore focus subsidies on identifiable decisions such as the use of particular fuels or technologies. For example, lawmakers might offer incentives for the construction and operation of new solar, wind, and geothermal power plants that emit little or no carbon dioxide. Or they might offer incentives for consumers to install energy-efficient appliances. Indeed, such incentives are a prominent feature of today's tax code.

These tax subsidies can reduce carbon dioxide emissions, but they do much less to harness market forces than a carbon tax would. If subsidies apply only to new power plants and new appliances, for example, they provide no incentive for

utilities to change the way they operate existing power plants or for consumers to reduce how much they use their existing appliances.

Subsidies for generation and new construction have another perverse effect: they make electricity cheaper, thus eliminating (indeed, reversing) one of the main incentives for people to reduce electricity consumption. Subsidies for energy-efficiency, meanwhile, make appliances less expensive. As a result, some consumers will purchase appliances they would not otherwise have owned; for example, tax credits for energy-efficient refrigerators will cause some consumers to add a second refrigerator.³

A related concern is that policymakers will need to choose winners and losers when designing such subsidy programs. Policymakers must decide, for example, which types of generating facilities or energy-efficient equipment should be eligible and how large the subsidy should be for each. Even with the best of intentions, it is impossible for policymakers to make such decisions in a way that is neutral across all technologies. If the subsidies apply to new facilities, for example, the playing field will be tilted in favor of new construction over better use of existing plants or energy efficiency. If subsidies apply to a specified list of known technologies, that will disadvantage newer, cutting-edge technologies. If subsidies are based on the amount of capital invested in clean energy projects, they will favor capital-intensive technologies over labor-intensive ones. And so on.⁴

Taxes are, of course, not immune to these problems. The gas guzzler tax, for example, is a remarkably inefficient way to discourage gasoline use. It affects only new cars, not existing ones. It provides no incentive for car owners to drive less or otherwise use less gasoline. And for a combination of historical and political economy reasons, it is decidedly not technology neutral: it applies only to cars, not to minivans, trucks, or sport-utility vehicles. The point, then, is not that taxes are always perfect, but that a well-designed tax will typically be more efficient than a subsidy program. The most efficient way to discourage gasoline consumption, for

³ For related discussions of the downsides of using tax subsidies to encourage cleaner energy sources, see Joint Committee on Taxation (2011), Metcalf (2008, 2009), and Toder (2006, 2007).

⁴ Another problem with tax subsidies is the way they interact with the rest of the tax system. Individual and corporate taxpayers may not be able to fully use tax incentives if they are subject to the alternative minimum tax or have experienced substantial losses. That further weakens the effectiveness of subsidies in influencing energy markets.

example, would be through a higher gasoline tax, not subsidies for ethanol or other alternative fuels.

2. Nonetheless, policymakers generally use the tax system to provide subsidies for energy activities they perceive as beneficial, rather than to impose additional costs on activities deemed harmful.

The largest energy tax policy is the excise tax on gasoline and motor fuels; its revenues currently run around \$30 billion each year. That tax does reduce gasoline use, but that's not why policymakers enacted it. Instead, the gasoline tax is effectively a user fee to finance the costs of highways through the Highway Trust Fund.

Other energy taxes raise little revenue. Taxes on petroleum to fund the Oil Spill Liability Trust Fund totaled only \$500 million in 2010, for example, and the gas guzzler tax raised only \$85 million (IRS 2011).

Tax subsidies play a much larger role in energy policy than do those small taxes. In its latest survey of tax preferences, the Treasury Department identified 25 provisions related to energy use (OMB 2011). The largest of these are the alcohol fuel credit and excise tax exemption (\$5.7 billion in tax savings in 2010), tax credits for energy efficiency improvements to existing homes (\$3.2 billion), credits for electricity production from renewable resources (\$1.5 billion), and the excess of percentage over cost depletion for fossil fuels (\$1 billion). Taken together, the 25 energy tax preferences totaled about \$16 billion in 2010.

Firms engaged in energy exploration, production, and distribution also benefit from tax provisions that are available to businesses generally. For example, some energy producers benefit from the deduction for U.S. production activities, a subsidy provided for domestic manufacturing activities. In addition, all businesses benefit from accelerated depreciation of machinery and equipment (and, in recent years, temporary bonus depreciation and full expensing).

These general business preferences provide another channel through which policymakers can provide favorable treatment to energy activities. Observers disagree, for example, about whether oil extraction should count as domestic manufacturing; by deciding that it does, lawmakers provide it with a tax advantage that is not available to many other domestic businesses.

Some energy producers similarly receive particularly favorable treatment through accelerated depreciation rules. Accelerated depreciation is available to all businesses that make capital investments, but its value depends on various parameters, including the assumed tax life of property and how that interacts with financing arrangements and other aspects of the tax system. The treatment given to oil and gas investments appears more favorable than that provided to other industries. The Congressional Budget Office (2005) estimated, for example, that the average effective federal tax rate on income from corporate investments was about 26 percent. The tax rates on energy investments, however, were lower; oil field machinery faced an effective tax rate of 22 percent, for example, and petroleum and natural gas structures faced an effective rate of 9 percent, the lowest of any physical investments CBO analyzed.

3. The preference for subsidies over taxes reflects differences in visibility, interest in industrial policy, and desire to stimulate the economy.

Policy experts have long touted the virtues of energy and environmental taxes, yet those levies are rarely used to address the negative effects of energy use. One reason is the visibility of the burdens they impose. If lawmakers propose to increase the gasoline tax, for example, the driving public will easily grasp that they will have to pay more to fill their tanks. If lawmakers propose a tax subsidy for low-emissions vehicles, in contrast, the burden is vague and diffuse. Someone must bear the burden from the missing revenues, but it's unclear who that is. Meanwhile, the subsidy is highly visible to its potential beneficiaries, producers and consumers of low-emissions vehicles.

In short, taxes often create broad-based, visible costs and diffuse benefits, while tax subsidies create narrowly focused, visible benefits and diffuse costs. That gives tax subsidies the upper hand politically even if they are a less efficient way of addressing energy and environmental concerns.

A second reason some policymakers favor subsidies is that they want to support specific technologies or industries. For example, some policymakers believe that it is important for the United States to develop strong domestic industries producing solar, wind, and other technologies. Levying higher energy taxes would certainly support that goal, but tax subsidies are a more direct way to attempt such industrial policies.

The weak economy, finally, has provided some policymakers a third rationale for favoring tax subsidies: as an attempt to provide economic stimulus. The American

Recovery and Reinvestment Act of 2009, for example, included several energy tax provisions that were characterized as ways to stimulate the economy.

Not surprisingly, these disparate goals can lead to conflicting policy recommendations. Energy and environmental taxes are the most efficient way to encourage cleaner energy use, for example, but introducing them immediately would likely conflict with the goal of providing fiscal support for the economy (depending on how the revenue would be used).

4. Energy tax subsidies worsen the budget situation.

Energy tax subsidies have real budget costs: the federal government gives up revenues that it would otherwise have collected under generally applicable tax laws. To cover those costs, lawmakers must increase other taxes, cut spending, or run larger budget deficits. Those adjustments subtract from any social gains that may result from energy tax subsidies. That's why many analysts have recommended that many tax subsidies, including those for energy, should be reduced or eliminated and that the resulting revenue be used to lower tax rates or reduce deficits.

The reverse is true for energy and environmental taxes. By levying taxes on gasoline or carbon, lawmakers can reduce concerns about pollution and energy security while raising revenues that can be used to improve fiscal policy. For that reason, many analysts have recommended that Congress address concerns about climate change by implementing a broad-based carbon tax whose revenues would be used either for deficit reduction (thus avoiding other tax increases) or to reduce taxes such as those on payrolls and corporate incomes.⁵

5. Energy tax subsidies should be viewed as spending through the tax code, not as tax cuts.

One reason energy subsidies have been more popular than energy taxes is that they appear to be tax cuts. When policymakers propose new tax incentives for domestic energy production, for example, they get credit both for being concerned about energy security and for favoring lower taxes. That perception is bolstered by official

⁵ This could also be accomplished under a cap-and-trade system as long as the government sells carbon allowances rather than giving them away for free.

budget accounting, which records credits, deductions, and other tax incentives as reductions in tax revenues.⁶

From a broader economic perspective, however, these tax incentives have much more in common with spending programs than they do with tax cuts. Indeed, it would be straightforward to structure many of these subsidies as spending programs.

In fact, the 2009 stimulus law did exactly that. The American Recovery and Reinvestment Act allowed energy companies to receive cash grants, paid by the Treasury, in lieu of the production tax credits or investment tax credits for which they would otherwise have been eligible.

The same could be done for many other energy tax incentives. The ethanol tax credit, for example, provides 45 cents to fuel blenders for each gallon of ethanol they use. Policymakers have chosen to structure this incentive as a tax credit administered by the Internal Revenue Service, but they could have chosen to have the Department of Energy send out subsidy checks instead. The logistics and political optics would be different—the program would be recorded as spending and different committees would exercise congressional oversight—but the economic, budget, and environmental consequences would be the same.

That equivalence holds equally for other energy tax incentives. Whatever their economic or environmental merits, these incentives are best viewed as spending in the tax code, not as tax cuts.⁷

6. The economic efficiency of energy tax subsidies varies; policymakers should favor subsidies that reward success in accomplishing policy goals and are as neutral as possible among competing technologies.

Policymakers have many options in designing energy tax subsidies. One approach is to offer production tax credits that subsidize qualifying facilities based on how much energy they produce. Another approach is to offer investment tax credits that subsidize businesses based on how much they invest in qualifying facilities. A third

⁶ There is one exception: if a tax credit is refundable, any amount that results in a refund, rather than a lower tax payment, is recorded as an outlay. Such refunds are important for tax preferences like the earned income tax credit and the child credit, but are small for energy credits.

⁷ I explore this topic in detail in Marron (2011).

approach is to allow firms to issue tax-exempt debt, which carries a lower interest burden than does regular debt.

In considering these and other approaches (including ones that run through the spending side of the budget), policymakers should consider several factors.

First, production incentives are typically more efficient than investment incentives. Production incentives reward businesses for producing new, presumably cleaner, energy and are agnostic about what mix of capital, labor, and materials firms use to accomplish that. Investment incentives, in contrast, reward businesses merely for making qualifying investments; they do not reward companies for operating that investment well, and they encourage firms to use relatively more capital and less labor and other resources.

Second, both production credits and investment credits are more efficient than tax-exempt financing. Private bond investors typically capture some of the benefits of tax-exempt debt. As a result, only some of the benefits flow through to the sponsors of new energy facilities.

Finally, policymakers should eliminate needless uncertainty for the intended recipients of any subsidies. In recent years, many tax incentives—e.g., for research and development—have been allowed to expire only to be retroactively renewed. The same has happened on several occasions with production credits for wind energy. Delivering subsidies this way weakens any incentives they provide.

7. Our tax system needs reform.

Any discussion of energy tax policies should recognize the larger challenges that our tax system faces. That system is needlessly complex, economically harmful, and often unfair. Because of a plethora of temporary tax cuts, it's increasingly unpredictable. And it fails at its most basic task, raising enough money to pay our government's bills. For all these reasons, the time has come for fundamental tax reform.

Such reform could follow many paths. Some analysts recommend the introduction of new taxes, such as a value-added tax, a national retail sales tax, or a carbon tax. A more likely starting point, however, would be to redesign our existing tax system and its myriad tax preferences.

Those preferences influence economic decisions in many aspects of life, including housing, health insurance, pensions, business investment, and the focus of today's hearing, energy use. Taken together, these preferences narrow the tax base, reduce revenues, distort economic activity, complicate the tax system, force tax rates higher than they would otherwise be, and are often unfair. By reducing, eliminating, or redesigning many of these preferences, policymakers could make the tax system simpler, fairer, and more conducive to America's future prosperity, raise revenues to finance both across-the-board tax rate cuts and deficit reduction, and improve the efficiency and fairness of any remaining preferences (Marron 2011).

That's why tax reform has been a centerpiece of many recent proposals to combat our exploding debt. The president's fiscal commission, for example, offered a range of proposals to restrict or eliminate most individual and corporate preferences in the tax code (National Commission on Fiscal Responsibility and Reform 2010). Many other groups have offered similar proposals.

Given America's daunting fiscal outlook and the manifest flaws of our tax system, these proposals deserve careful consideration. But lawmakers should not simply eliminate every tax preference. Some tax preferences try to promote important social and economic goals, including the move to cleaner energy sources. Rather than discard them all wholesale, lawmakers should weigh the benefits and costs of each.

In considering energy tax preferences, moreover, lawmakers should also consider whether taxes, rather than tax subsidies, might be a more effective way of accomplishing policy goals.

Thank you again for inviting me to appear today. I look forward to your questions.

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