

Comments of the American Council for an Energy-Efficient Economy on Tax Reform and Energy Efficiency

April 12, 2013

We commend the House Ways and Means Committee for beginning consideration of tax reform. The American Council for an Energy-Efficient Economy is a research organization founded in 1980 that focuses on technologies, programs and policies that improve energy efficiency in the U.S. For the past two years we have researched ways the current tax code impedes cost effective investments in energy efficiency and ways to improve the tax code so it instead encourages energy efficiency investments with only a limited cost to the Federal Treasury. Our full research is summarized in a February 2013 report.¹ Here we briefly summarize our key recommendations.

1. **Refine depreciation periods to more accurately reflect the average service lives of equipment.** Under current law, depreciation periods for many types of equipment are written into the law, and some of these depreciation periods bear little relationship to typical service lives in the field. Particularly egregious are the depreciation periods for equipment in commercial buildings, including heating and cooling systems, lighting fixtures and controls, and roofing systems. Currently, this equipment is depreciated over 39 years, the same depreciation period as is used for a new commercial building. However, lighting, cooling and heating equipment and roof systems typically have lives of 15-20 years, not 39 years. The 39-year depreciation period acts as a barrier to energy efficiency as many businesses will choose to repair equipment when it fails so as to avoid having to write off the un-depreciated value. Since equipment has been steadily increasing in efficiency, encouraging equipment replacement will save energy and also create sales and jobs for equipment manufacturers. We recommend that Congress establish a depreciation period of about 15 years for this equipment, but authorize the IRS to modify depreciation periods in response to market changes with the guidance that depreciation periods should approximate average service lives in the field.

Likewise, in the case of combined heat and power (CHP) systems (systems that generate both heat and power, achieving high efficiencies), the depreciation period varies as a function of who owns the equipment and how it is used, even though often the same equipment is used by a variety of owners and for a variety of applications. We recommend that a single service life be selected for all owners, perhaps 15 years.

2. **Promote capital investment in manufacturing** by using low-cost approaches to spur increases in capital investment. Much of the equipment and production processes in America's factories are decades old and not as efficient as modern equipment and processes in use by many of our international competitors. Modernizing these factories will allow them to better compete in world markets by improving product quality and reducing product costs, including through reduced energy use. As we emerge from the Great Recession, many industrial firms have capital to invest, but a nudge from the tax code could spur substantial additional investments here in the U.S. We suggest three possible tax strategies that could spur investment but with low cost to the federal Treasury:

¹ Nadel and Farley. 2013. *Tax Reforms to Advance Energy Efficiency*. Washington, DC: American Council for an Energy-Efficient Economy. <http://aceee.org/research-report/e132>.

- a. Provide a low tax rate for repatriation of company profits *provided* these repatriated profits are used to increase a company's capital investments relative to their average capital investments in recent years (e.g., a three-year rolling base period).
- b. Allow accelerated depreciation on *increased* capital investments in production capacity, allowing companies to reduce their near-term taxes.
- c. Provide repayable tax incentives for increased capital investments. The credit would be taken on taxes in the year the expenses were made, but then the credit would be paid back to the Treasury in subsequent years.

We recommend that at least two of these approaches be enacted. The first approach would benefit only large multinational firms, while the second or third approach should be included in order to benefit firms that primarily serve the domestic market. A firm would only be able to use one of the approaches.

3. **Refine existing energy efficiency tax incentives** to focus on using a market transformation approach to promote energy-saving technologies and practices that have a limited market share today, but where temporary federal incentives can advance these technologies and practices to the point where they can prosper without federal incentives. Specifically, we have reviewed experience with energy efficiency tax incentives provided in the 1980s and over the 2005-2011 period and based on this review we recommend that the following principles apply:

- Set product performance standards in terms of energy efficiency, letting all technologies compete.
- Target efficiency levels and new energy sources that currently have a very small market share, which keeps the cost of tax incentives down and minimizes the number of “free riders” (consumers who take the tax incentives but would have made the same purchase decisions, even if the tax incentives were not offered).
- Provide a substantial incentive to motivate significant additional sales.
- Monitor market share of eligible products and when the market share starts to become significant, the tax incentives should either be phased out or eligibility levels increased, starting the process to “transform markets” again.
- Be in place for long enough so manufacturers and other market players find it worth making investments to develop and market eligible products (e.g., about five years).

Tax incentives first enacted in 2005 illustrate how a focus on advanced technologies can help to transform markets. For example, high-efficiency appliances, heating and cooling equipment, and new homes now have much higher market shares due in significant part to these tax incentives, and in the case of appliances, the original qualification levels are now standard practice and qualification levels have been tightened twice. Going forward, limited federal funds for energy efficiency tax incentives should be provided in four areas:

- a. Very high-efficiency heating and cooling equipment
- b. Very-efficient new homes
- c. Efficient commercial buildings
- d. Comprehensive retrofits to existing homes

We recommend that legislation establish an initial qualifying efficiency level based on products and practices that currently account for about 5% of sales, as well as a couple of more stringent levels. The market share of products and practices qualifying for the least stringent level should be monitored, and whenever the market share reaches 15%, these products and practices should no longer be eligible for tax incentives and the next most stringent level used instead. When the market share for the most stringent level in the legislation reaches 15%, that tax credit should be phased out. In this way limited federal funds can encourage nascent energy savings technologies and practices, but when they become established in the market (e.g. a 15% market share) they should be sufficiently established in the market that further federal support is not needed. We can provide additional details on this approach if you are interested.

Similarly, tax incentives for other energy sources, be they nuclear or oil and gas technologies, could use a similar approach – targeting advanced technologies and practices and phasing the tax incentives out once the technology becomes established in the market.

In our report we examined the impacts of three of these provisions (depreciation, capital investment and energy efficiency incentives) on the federal budget and of the energy efficiency tax incentive provision on the overall U.S. economy. This first analysis found that these three provisions will actually increase federal tax collections as the extra revenue gained will be about \$30 billion more over a 15-year period than the cost of the incentives. This extra revenue is driven by two factors: (a) as energy use is reduced, business profits increase, and a portion of these extra profits are paid in taxes; and (b) a portion of the capital investment provision will be paid out of repatriated profits that would not be available for taxation if these profits remain “parked” overseas.

To estimate the impact of the energy efficiency tax incentives on the overall economy, we used ACEEE’s DEEPER input-output model of the U.S. economy. The DEEPER model looks at cash flow in different sectors of the economy and estimates the impact of efficiency investments relative to the investments in conventional energy supplies that are displaced. DEEPER looks both at the investments and the impact of energy savings that are available to be re-spent. Overall, we found that these energy efficiency tax incentives will result in a significant increase in employment—an average of about 160,000 jobs over the 2014-2030 period. The job gains start at about 52,000 in 2014 and steadily increase to about 300,000 in the final years. These job gains are driven by both increasing investments in energy-efficient products and services as well as reinvestment of the energy bill savings. Gross domestic product (GDP) also increases modestly as a result of this provision, with GDP up an average of \$8.3 billion annually over the 2014-2030 period. Interestingly, since federal tax revenues are projected to average about 19% of GDP, if this same 19% applies to the \$8.3 billion per year GDP increase, the macroeconomic impacts of these tax incentives will increase federal revenue by about \$1.6 billion per year *in addition* to the direct benefits discussed in the paragraph above.

If enacted, these reforms could reduce barriers to cost-effective energy efficiency investments and contribute toward increase investments in efficiency. With careful attention to details, the tax code can be an enabler to efficiency investments and not a barrier.

For further details we refer you to our full report (see footnote 1). We would also be happy to discuss these ideas with Members or Staff.