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

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We compliment the Senate Finance Committee for beginning an effort to consider tax reform using zero-based budgeting. 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 United States. 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 encourages energy efficiency investments with limited cost to the Federal Treasury. Our research is summarized in a February 2013 report.[1] Here we briefly summarize several of our key recommendations in the context of cost-effective, zero-based budgeting.

1. **Refine depreciation periods to more accurately reflect the actual service lives of equipment.** Any new tax code is likely to include depreciation for equipment owned by businesses, so that the costs of new equipment can be recovered over a reasonable depreciation period based on the average service life of the equipment. Under current law, Modified Accelerated Cost Recovery System (MACRS) is generally used, under which most equipment is depreciated over a period slightly shorter than its expected service life. We are neutral as to whether depreciation should be accelerated or not; rather, we want to ensure that depreciation schedules are fair and equitable and do not create a disincentive to productive and energy-saving investments. Currently some products in some types of buildings receive "penalty depreciation"–they are depreciated for a much longer period than their expected service life. This should be ended and all depreciation periods based on actual typical service lives..

   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 greater 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 new equipment has been steadily increasing in efficiency, encouraging quicker equipment replacement will save energy and also create sales and jobs for equipment manufacturers. We recommend that Congress establish a depreciation period for this equipment of 15 years (if using MACRS) or 20 years (if MACRS is

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[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 .

being ended). Furthermore, the legislation should authorize the IRS to modify depreciation periods in response to technological or market changes with the guidance that depreciation periods should be based on actual 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, also at 15 years.

2. **Phase out some energy efficiency tax incentives and update and better target other energy efficiency tax incentives.** Under tax reform, tax incentives should be designed to foster market transformation (bringing advanced products and services to the point they can prosper in the market without incentives) and, as much as possible, be based on performance. We recommend that section 25C and 45M tax incentives be allowed to expire at the end of this year. The version of 25C in effect this year is doing little to promote energy efficiency and in its current form provides a poor return on federal investments. The 45M tax incentive has been much more effective, but the manufacturers who would use the credit no longer support it.

   This leaves three existing energy efficiency tax incentives, which we recommend be updated to emphasize a market transformation approach. Temporary federal incentives should promote energy-saving technologies and practices that have a limited market share today to the point where they can compete without federal tax incentives. ACEEE has reviewed the effectiveness of energy efficiency tax incentives provided in the 1980s and over the 2005-2012 period, and based on this review we recommend that the following principles apply:

   - Set product performance criteria in terms of energy efficiency, letting all technologies compete fairly.

   - Target efficiency levels that currently have a 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 in order to motivate significant additional sales of advanced energy-efficient equipment.

   - Monitor market share of eligible products, and when the market share starts to become significant, either phase out the tax incentives or increase eligibility levels, starting the process to "transform markets" again.

- Put the incentives in place for a long enough period of time that 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 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 three areas:

a. Efficiency in commercial buildings (both new construction and substantial retrofits)
b. Highly-efficient new homes
c. Comprehensive retrofits to existing homes

In the case of commercial buildings we recommend the extension of the current section 179D program, but increasing the incentive to $3 per square foot (the current incentive of $1.80 per square foot is not enough to attract the level of participation needed to move the market) and instituting tracking of participating building square footage as a percentage of total new construction. When participating new building square footage reaches 15% of all new construction square footage, the level of energy savings to qualify should be tightened, such as requiring 60% energy savings relative to base code instead of the current 50% savings. We also recommend adding a provision to encourage retrofits of existing buildings that reduce energy use at least 20% (compared to pre-retrofit). The 50% savings threshold for new buildings and the 20% savings threshold for existing buildings set a high bar for new construction and retrofit projects to meet, with federal incentives helping to build a market for such high-performing buildings. A good foundation for such a provision is S. 3591, introduced by Senators Snowe, Bingaman, Feinstein and Cardin in the 112th Congress. This bill would need to be modified to monitor participation and increase the qualifying level when the participation rate reaches 15%.

We recommend similar changes to the section 45L new home incentive. Finally, we support legislation to provide incentives for retrofits of existing homes that achieve at least 20% energy savings, along the lines of the Cut Energy Bills at Home Act (S. 1914), introduced by Senators Snowe, Bingaman and Feinstein in the 112th Congress.

Tax incentives for other energy sources, be they nuclear, oil or 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.

3. **Promote capital investment in manufacturing** by using low-cost approaches to spur increases in capital investment. By using very limited tax incentives we can encourage more production and jobs in the United States and help to improve the international competitiveness of American

manufacturers. Much of the equipment and production processes in America's factories are decades old and are not as efficient as modern equipment and processes in use by many of our international competitors. Modernizing our 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 United States. We suggest three possible tax strategies that could spur investment with low cost to the federal Treasury:

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 investments 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.

In our report we examined the impacts of these recommendations (depreciation, energy efficiency incentives and capital investment) on the federal budget and on the overall U.S. economy. This first analysis found that these three provisions could 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. This analysis was based on a slightly broader set of tax incentives than we recommend above,[2] and thus these numbers

[2] The analysis in our report also includes updated versions of the 45M and 25C provisions.

should be considered indicative. We will revise our analysis as the tax reform debate advances. 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 tax receipts discussed in the paragraph above.

If enacted, these reforms could reduce barriers to cost-effective energy efficiency investments and contribute toward increased 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. You can be in touch with Steve Nadel at 202-507-4011 or email: snadel@aceee.org or Suzanne Watson at 202-507-4006 or email: swatson@aceee.org