Energy Independence and Security Act of 2007: No Subsidy Left Behind

Jonathan A. Lesser

Signed into law fewer than two months ago, the Energy Independence and Security Act of 2007 (EISA) promises U.S. consumers bushels of energy savings and a more pristine environment. Like many programs governmental, however, those promises, even if they were intended to be kept, will come at a high cost, larding subsidies on the chosen few while imposing higher costs and greater inconvenience on the rest of us.

The EISA contains far too many subsidies to discuss in one short column,[1] so I will focus on three aspects that are likely to raise the greatest economic and environmental issues: (1) higher mileage standards for cars and light trucks (known as CAFE standards); (2) a mandated five-fold increase in ethanol production for those fuel-sipping new cars; and (3) an effective ban on incandescent light bulbs starting in the year 2012.

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HIGHER CAFE STANDARDS

Environmentalists have been trying to raise Corporate Average Fuel Economy (CAFE) standards for years. With this Act, they have succeeded. The Act mandates that new cars and light trucks achieve an average of 35 miles per gallon (MPG) by the year 2020 and, between 2021 and 2030, "the maximum feasible average fuel economy standard for each fleet for that model year,"[2] whatever that means. Moreover, the EISA also mandates that all vehicles achieve a minimum fuel economy of 27.5 MPG, or "92 percent of the average fuel economy projected"[3] for the given model year. Thus, manufacturers' ability to produce and sell the large, horsepower-heavy cars and trucks that consumers actually want to buy will be severely curtailed.

The economics of higher CAFE standards are well-known to most undergraduate economics students. Typically, mandated performance standards are inefficient in changing behavior, because they restrict consumer choice. Although manufacturing standards are arguably useful for "generic" equipment (such as refrigerators and freezers) whose attributes tend to be limited, the same cannot be said of automobiles, which have numerous attributes designed to meet the myriad needs of consumers.

A far more direct, and lower-cost, approach would be to increase gasoline taxes. Not only would this continue to allow consumers who want to drive large SUVs, "muscle" cars, and other gas-hogs—as long as they were willing to pay the price—it would also send clear price signals to all consumers. Nevertheless, in its infinite economic wisdom, Congress determined that imposing obviously direct costs on consumers (e.g., higher gasoline taxes or, even better, a more gen-

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eral carbon tax) to achieve the purported goals of energy "independence" and "security" was politically infeasible. One can only assume that, like the Wizard of Oz telling Dorothy to "pay no attention to the man behind the curtain," Congress believes consumers will not notice the myriad indirect taxes on them.

Will these new, higher-mileage standards help move the United States closer toward the Act's stated goal of energy independence and security? Not hardly. Since the original CAFE standards were put into place in 1975, consumers have responded to better fuel economy and lower costs per mile by driving more miles, on average, every year. At the same time, US dependence on foreign oil has increased, owing to the gradual diminishing of older US wells and the lack of new exploration and development opportunities, such as in the Alaska National Wildlife Refuge. That trend is unlikely to change until technological advances propel us into a postpetroleum economy. Whether such an economy would be part of a futuristic Jetsons-like world or one in which we live in caves, wear skins, and carry clubs is an open question.

As for reducing greenhouse gas emissions, which is the environmentalists' primary aim in pushing for higher CAFE standards, the actual effects are likely to be negligible. In its *Annual Review of Energy 2008,* for example, the US Energy Information Administration (EIA) predicts that per capita US emissions will increase slightly between 2007 and 2030—from 19.7 tons per person to 20.0 tons per person.[4] Moreover, to the extent that the new standards restrict consumers' access to cars they want to buy, consumers will be less likely to part with their older, less fuel-efficient vehicles.

BANNING INCANDESCENT LIGHT BULBS: ANOTHER BRIGHT IDEA

The EISA does not overtly ban incandescent light bulbs. Instead, it imposes efficiency standards on incandescent bulbs in the form of minimum lumen per watt values that are to be phased in by 2014.[5] Even though the word "ban" is nowhere to be found in the Act, the impact will be the same. Most common incandescent light bulbs will be phased out just six years from now. This means that millions of businesses and consumers will have to purchase and install more efficient compact fluorescents (CFs).

There are numerous problems with the effective ban on most incandescent bulbs (thankfully, left-hand thread lamps are excluded) including forcing consumers to pay not only for new, more expensive CFs, but also forcing them to install, in many cases, new fixtures. Do you like dimmer switches to set the mood? Well, CFs cannot be used on dimmer switches; thus, you'll have to install new dimmer switches that can be used with CFs. Moreover, despite protests of CF proponents to the contrary, the quality of the light from CFs is awful. Not only do the bulbs take several minutes to brighten up, but they also make terrible reading lights. If you do not believe me, try this easy experiment. Sit down under a CF lamp, turn it on, and start reading this column. In short order, your eyes will be begging for mercy.

Another curiosity of CFs is their longevity. Although CFs are supposed to last six times longer than similar incandescents, the longevity of CFs will be reduced if they are used for very short periods of time. In fact, the US Department of Energy recommends that CFs be left on no less than 15 minutes at a time, so as not to shorten their lifetimes. Now that makes perfect economic sense—save energy by leaving the lights on. Less energy-intensive light bulbs will encourage consumers to leave the lights on, and this will lead to greater, not less, energy consumption.

Of course, there are always accidents, such as that beautiful table lamp that kitty knocks over. Not only will it cost more to replace that broken CF, but a disposal problem will also result. Unlike a broken incandescent bulb, a broken CF is considered hazardous waste. The reason is mercury. So, while the government is doing its best to reduce mercury emissions from coal-fired power plants, it is effectively promoting more home-based mercury emissions. As a recent *US News and World Report* article notes, "[U]sing a drop cloth might be a good new routine to develop when screwing in a light bulb."[6] Granted, there may be mercury-free CFs by the year 2012 (when the new lighting standards begin to phase in), and bulbs based on light-emitting diodes are

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slowly becoming available, although their prices remain extremely high—much higher than CFs.

MORE ETHANOL: A TIGER IN YOUR TANK, OR A TIGER BY THE TAIL?

The other major thrust of the EISA is a mandated five-fold increase in biofuel production. The Act requires that at least 36 billion gallons of biofuels be used by the year 2022; furthermore, this total is to include 21 billion gallons of "advanced" biofuels. Although farmers growing corn will surely benefit, neither consumers nor the environment will.

First, biofuel production, which today consists almost entirely of corn-based ethanol, is no bargain. It is fuel-intensive and heavily subsidized. A recent article by David Rotman in *Technology Review* refers to the "irrational exuberance over ethanol" having turned into a "dreary hangover."[7] Growing and then fermenting corn to make ethanol takes a lot of energy. Moreover, the increased demand for corn-based ethanol is causing the price of corn, as well as other agricultural commodities (such as wheat), to increase steeply. In fact, the authors of an article published in the May/June 2007 issue of *Foreign Affairs* point out that "the enormous volume of corn required by the ethanol industry is sending shock waves through the food system."[8]

Although one can clearly argue about the morality of using food crops for fuel (this is a practice that increases food costs for the poor), more relevant to this column is whether the massive production of biofuels mandated under the EISA will provide any environmental benefits. The answer appears to be that the mandates will provide few, if any, such benefits. Although a gallon of ethanol has a slightly lower carbon footprint than a gallon of gasoline, massive increases in ethanol production come with their own set of local environmental impacts. Growing corn requires great quantities of fertilizers and herbicides whose use can contribute to groundwater pollution and lead to soil erosion.[9] Are those environmental tradeoffs, along with higher food prices, worth a slight reduction in greenhouse gas emissions? Will producing 36 billion gallons of biofuels by the year 2022, roughly 20 percent of total projected gasoline consumption by EIA,[10] provide an appreciable increase in energy independence and security?

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FROM BAD ECONOMICS TO WORSE

The EISA might as well be called the "No Subsidy Left Behind Act." Unfortunately, while "energy independence and security" makes for a tasty sound bite, the economic reality will be far less palatable. Not only is the EISA unlikely to achieve either energy independence or security—vague as those goals are— but the resultant costs to consumers and businesses will be high, and the environmental benefits will be negligible. We can only hope that technological advancements will come along and make much of this legislation irrelevant. Such advancements might even come from the public sector; after all, governments' track records for picking technology winners and losers have been almost perfect, albeit wrongly so, for decades. Meanwhile, through the provisions of this bill, the pockets of energy consumers will continue to be drained; which is, of course, all for their own good.

NOTES

1. For example, Title XIV authorizes expenditures of $5 million per year to enforce new pool and spa safety requirements to prevent unintentional drowning. It is not clear whether preventing intentional drowning will garner similar largesse.
2. Title I, Section 102(b)(2).
3. Title I, Section 102(b)(4).
4. EIA, *Annual Energy Outlook 2008,* Reference table summary, Table 18, http://www.eia.doe.gov/oiaf/aeo/aeoref_tab.html.
5. Title III, Section 321(a)(A)(6)(i).
6. *US News and World Report* online, December 19, 2007, http://www.usnews.com/articles/business/economy/2007/12/19/faq-the-end-of-the-light-bulb-as-we-know-it.html.
7. Rotman, D. (2008, January/February). The price of biofuels. *Technology Review,* http://www.technologyreview.com/printer_friendly_article.aspx?id=19924.
8. Runge, C. F., & Senauer, B. (2007, May/June). How biofuels could starve the poor. *Foreign Affairs,* http://www.foreignaffairs.org/20070501faessay86305-p10/c-ford-runge-benjamin-senauer/how-biofuels-could-starve-the-poor.html.
9. Pimentel, D. (2003, June). Ethanol fuels: Energy balance, economics, and environmental impacts are negative. *Natural Resources Research,* 12(2), 127–133.
10. EIA, *Annual Energy Outlook 2008,* Reference table summary, Table 11, http://www.eia.doe.gov/oiaf/aeo/aeoref_tab.html.

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