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Five ways to look at energy efficiency

Essayists debate whether it helps decrease pollution

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Are energy efficiency measures, for light bulbs, for cars, for applicances, barking up the wrong tree? There's evidence that efficiencies simply lead people to use more than they once did, erasing any benefits. There's also evidence that the slippage that does occur does not amount to the energy saved. Five ways to look at the subject.

Just to step outside the power industry discussion for a moment, yet stay on a relevant topic, I found a very interesting discussion on energy efficiency on The New York Times last week. The paper's "Room for Debate" section brought together five brief essays by a diverse lot who discussed the concepts behind the conventional wisdom that energy efficiency is a good thing. Its title is "The Siren Song of Energy Efficiency [3]."

I can recommend reading the five essays, three of which are briefly excerpted here. As noted below, I'd appreciate readers thoughts on the topic. The thesis, in truncated form: "Does the quest for efficiency distract from more effective approaches to cutting carbon output? What can consumers do that would be more effective?"

(Hint: If you don't "believe" in global warming or fossil fuel emissions' contribution to air quality degradation—two major drivers for the smart grid—you can skip this exercise.)

"Amory Lovins, Sec. of Energy Steven Chu and other efficiency enthusiasts are undoubtedly correct when they argue that we

Americans could live regally on little more than we currently waste," wrote New Yorker writer David Owen. "But turning efficiency improvements into environmental gains isn't as easy as they make it sound.

"Nearly every device we use today is more efficient than whatever its equivalent was in 1970," Owen continued. "Yet energy consumption has soared. Increasing the efficiency of energy-using machines has the practical effect of making energy cheaper, and when we make useful things cheaper we use more of them."

Matthew Kotchen, professor of environmental economics and policy at Yale University, took a similar tack, with a twist.

"Basic economics tells us that lower prices increase demand, meaning that people tend to drive more when it costs less to go each mile," Kotchen wrote. "People are also more likely to purchase and use things like air-conditioners when they cost less to operate. These so-called rebound effects eat into the initial energy savings of efficiency—because when things become more efficient, we tend to use them more.

"While studies have shown that rebound effects are real and potentially important, they are not an argument for dismissing the importance of energy efficiency," Kotchen continued. "Most of the evidence suggests that rebound effects offset only a fraction the environmental benefits. Perhaps the most important question when it comes to energy efficiency is why consumers do not focus on it more.

"This is the energy paradox. While there are many explanations for why it exists, a simple one is that most of us are unaware of efficiency when shopping for goods that we buy. One way to address this problem is improved product labeling that reports efficiency in terms that people care about—money saved and pollution avoided. Recent changes to the E.P.A.'s efficiency labels for new vehicles and appliances are a step in the right direction and should help consumers make more informed decisions. And for those individuals looking to have an impact beyond their own consumption choices, it would be useful to encourage political support for energy efficiency as part of a national energy policy."

The take by Peter van Doren, a senior fellow at the Cato Institute, a libertarian think tank founded by the Koch brothers, who run Koch Industries, which runs fossil fuel interests, is interesting.

"The one concept that all students, even those sleeping in the back of the lecture hall, learn from an introductory economics class is that prices matter," van Doren wrote. "And more particularly, students learn that as prices increase, the quantity consumed goes down. So if fossil fuel combustion produces byproducts that cause negative health effects on third parties as well as changes in the temperature of the atmosphere, the obvious lesson from economics is to increase fossil fuel prices enough through taxation to account for these effects.

"Though firms and consumers will react to these prices in thousands of different ways, the net result is less aggregate fossil fuel combustion," van Doren continued. "Voters and their elected officials resist this simple insight and instead prefer to impose only energy efficiency standards on manufacturers of consumer appliances and automobiles.

"A singular emphasis on energy efficiency rather than prices has two important drawbacks," van Doren concluded. "First, more efficient appliances and automobiles cost much more to achieve equivalent energy savings than a tax on fossil fuel consumption. This occurs because higher prices encourage all possible avenues of reducing energy consumption, which efficiency standards do not. Second, more efficient appliances and automobiles reduce operating costs, which leads consumers to use more energy than they would if prices had increased."

So, just to ignite our readers, I'm going to favor higher taxes on fossil fuels and greater energy efficiency and a national campaign akin to the 1960s' campaign against littering to educate Americans on wasted energy and wise use. We've had innumerable opportunities to do these things and, so far, we've succeeded generally in the energy efficiency area. The global market will send gas prices up and down in our time, so a few cents more in tax is not the economic death knell that anti-government demagogues would have us believe.

Devices that use energy more efficiently are better. Being aware of the tendency to use more due to those efficiencies can be overcome with education and discipline, two qualities that have fallen into disuse in the public discourse. Wise use is particularly important in an era when finite fossil fuel supplies must eventually give way to infinite, renewable supplies.
And now, dear reader, let us hear your thoughts.