

Energy-Efficiency Madness

How Many Congressmen Does It Take to Screw the Light Bulb?

by Sam Kazman

The man at your door appears to be either a salesman or a home inspector. He's got some brochures and a clipboard, and he's saying something about saving you money. The last time you had a visitor like this, he was from the municipal recycling authority, and he'd come to inform you that cigarette and cigar butts were now to be placed in your recycling bin rather than in your trash. You thought he was kidding—until he pulled out some study on the use of tobacco-butt extracts to protect steel against corrosion. *That'll teach me to question authority*, you might have said to yourself.

But this guy is different. "I'm talking about things that will save you money," he says. "They might seem pricey at first but, in the long run, you'll profit."

You offer to take a brochure and think about it, but he won't leave. You try to thank him for his concern for your financial well-being, but he still won't leave. Persistent guy, this Mr. X. You begin to gently close the door on him, but he blocks it with a strategically placed foot. And before you know it, Mr. X is in your living room, taking over your coffee table with his papers and clipboard.

Mr. X acts like he's here to stay... and he is. He's a government agent. He's preaching the gospel of high efficiency. You don't have a choice in the matter because he's here to tell you what's coming, like it or not. In fact, a lot of it is already here.

Low-Flow Bathroom Wonders

So it's no surprise when Mr. X asks to see the bathroom, and then heads there without waiting for your response. The toilet is the natural place for him to go first; it's one of his regulatory pride and joys—a shining porcelain example of government efficiency mandates at work. Beginning in 1994, federal law required that new toilets use only 1.6 gallons of water per flush, less than half the amount then used by conventional models. The new toilets would supposedly work fine, and Europe had long been using them. The amount of water saved would be tremendous, and the reductions in water bills would more than offset the cost.

But, in practice, things turned out differently. Despite their costing far more than regular toilets, many of the new



models worked poorly—so poorly that they required two flushes to do what one had done before, thus eliminating any savings in water use. A gray market in conventional toilets sprang up, and old discarded units suddenly became prized items commanding premium prices. Columnist Dave Barry joked that, living in Miami, he could buy illegal drugs with no trouble at all, but he couldn't get hold of an old-fashioned toilet. "I spend 23 percent of my waking hours flushing the new ones," he claimed. There was a groundswell of popular opposition to the low-flow models, and some congressmen tried to repeal the toilet rule. But it failed after running into opposition, not just from environmentalists but from toilet manufacturers as well, who were looking forward to profits

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from their high-priced low-flush models and didn't want to see that market undermined by a renewal of consumer choice.

And, thus, low-flow toilets, and the law that mandates them, are still with us. In fact, the array of everyday items subject to federal efficiency mandates has mushroomed. This is because *efficiency* has become a mantra of politicians and environmentalists, who act as if private industry can't improve its products without government prodding.

But there's a basic question that needs to be asked: If these technologies are so good that they'll save us money, then why do we need laws forcing them on us? And if we do have such laws, doesn't that suggest that the technologies aren't really all that good?

Before your visitor leaves the bathroom, he'll point out another item—the showerhead. Showerhead flow rates were restricted by the same federal law that hit toilets. As a result, new showerheads today may deliver no more than 2.5 gallons per minute, about half of what showerheads used to put out. Like their brethren toilets, low-flow showerheads often perform poorly. Regulatory advocates may claim they work fine, but the facts suggest otherwise. In 2009, for example, *Consumer Reports* (a strong advocate of efficiency mandates despite its alleged commitment to consumers) tested a showerhead that, it noted, “seemed too good to be true—or legal,” inadvertently confirming that these two qualities were mutually exclusive. In fact, the model in question *was* illegal, exceeding the federal flow standard by almost 60 percent. But rather than give its readers a chance to buy one of these

bonanzas, *Consumer Reports* dutifully reported the model to the Feds.

And, again not unlike the toilets, the new showerheads have produced their own brand of humor. In a 1996 *Seinfeld* episode, for example, Kramer becomes so desperate for a good shower that he's mistaken for a dope addict, and he pays a small fortune in cash to a Serbian smuggler for an illegal high-powered showerhead (the Commando 450, “only used in the circus—for elephants”).

But, unlike toilets, showerheads use hot water, and so their flow restrictions are touted as saving both water and energy. But why does that make showerhead design a federal issue? People who want to cut their hot water bills have long been able to do so without Congress breathing down their necks. They could take shorter showers, or run their showers at less than full blast, or turn their shower faucets from hot to warm... or they could even buy one of the low-flow showerheads that were available long before the federal law. Instead we have an across-the-board rule with a bureaucratically simple target—gallons per minute. Thankfully, dissatisfied bathers more concerned with quality than money still have other options, such as taking longer, hotter showers or switching to baths, which use much more water. Or they can turn to shower towers, fixtures that use multiple low-flow showerheads so that their combined output exceeds the 2.5-gallons-per-minute limit. Unfortunately, that last loophole was recently plugged by the Department of Energy (DoE).

Screw the Laundry, Save the Earth

DoE's energy-efficiency standards cover practically all major household appliances, from refrigerators to laundry machines to air conditioners and water heaters. Their scope and severity have less to do with what's practical, and more to do with what's politically attractive. Consider, for example, the lowly top-loading laundry machine. In the last 15 years, it's been increasingly displaced by more expensive front-loaders, which more easily meet DoE's standards. Front-loaders use less hot water, are gentler on clothes, and they put on a good soapy show through their front windows. They also tend to be somewhat finicky and less reliable, often developing an odor problem. Procter & Gamble recently introduced a new laundry product that would have seemed ridiculous a decade ago—a cleanser for washing machines, specifically front-loaders. In effect, you've now got to wash the machines that wash your clothes.

Top-loaders have their own advantages: they can be stopped mid-cycle to toss in a wayward sock; they don't make you stoop to unload them, and, perhaps most importantly, they cost less. Unlike in Europe—where cramped apartments and high energy costs make front-loaders the market leaders—top-loaders continue to be more popular in the US.

But in June of 2007, *Consumer Reports* ran a surprising story titled "Washers That Don't Wash." It found that many new top-loading models did an unexpectedly poor job at cleaning, with some having "the lowest scores we've seen in years." You could still find very good top-loaders, but only if you paid \$900 or more, about twice what most of models cost. Why the sudden drop in cleaning ability? Because DoE's standards had become more stringent, forcing manufacturers to restrict the amount of hot water used by their machines. The result was a lousier wash (something that just might bother people who like to hang out in smoking lounges). Of course, when DoE had first announced the stricter standards several years earlier, it had promised that cleaning performance wouldn't suffer. Fat chance.

In protest, my organization (Competitive Enterprise Institute) started a "Send Your Underwear to the Undersecretary of Energy" campaign on YouTube, complete with a link to a website that allowed people to e-mail their cyber-undergarment of choice (boxers, bloomers, Underoos) to DoE. But Congress remained clueless to the problem and, several months later, directed DoE to make its appliance standards even more stringent.



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Wishing Upon An Energy Star

The federal energy-efficiency push gets much of its impetus from a second source as well—the Environmental Protection Agency's Energy Star program. The program began in the early 1990s to advise the public on computer equipment energy use, but it has grown to cover appliances, heating and cooling systems, and even new home construction. Unlike DoE's standards, which all appliances in a given category must meet, the Energy Star program is advisory in nature, highlighting the very top performers.

But EPA's emphasis on energy efficiency can lead to some lousy advice. For example:

- EPA recommends dishwashers with soil sensors, which monitor how dirty each load of dishes is in order to adjust the water temperature accordingly. You'll supposedly make up the higher purchase price of these high-tech models through your savings on hot water. But a few years ago, it turned out that the sensor-equipped models were actually the least efficient machines to operate for heavy loads. That meant that people following EPA's advice were wasting money twice over: first, when they bought the more expensive models and, second, each time they operated them.
- For central heating and cooling setups, the highest efficiency systems are not only the costliest, they're also the most prone to break down. Forswearing ideology, Consumer Reports recommends against them.
- EPA suggests turning down your water heater thermostat to a relatively low 120 degrees. The Department of Labor, on the other hand, reports that the bacteria that cause Legionnaires' disease can multiply in water at that temperature. If there are elderly or immune-compromised people in your household, it recommends 140 degrees. Very few people know about the Legionnaires' risk, and they sure won't learn about it from EPA's Energy Star website.

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Out The Door, Into The Car

But none of these problems seem to faze Mr. X as he goes through your house, checking off his money-saving improvements. On his way out, he checks his watch, looks at the SUV in your driveway, and condescendingly shakes his head. "It's late, but I'll be back another day." And then he gets into his car, a tiny Smart Fortwo. That's yet another pride and joy, and here's where the story gets ugly.

Not because the Smart Car is inherently bad—it isn't. Its small size and weight mean that its gas mileage is great and parking is a breeze. But small size and weight have some severe disadvantages too, such as reduced crashworthiness. And for

over 30 years, car size and weight have been the direct targets of yet another federal energy-efficiency program: Corporate Average Fuel Economy, popularly known as CAFE and run by the National Highway Traffic Safety Administration (NHTSA).

CAFE's purpose is to boost automotive miles per gallon, and one of the most powerful methods for doing so is by "downsizing" vehicles—that is, making them smaller and lighter. But that means there's less material to absorb collision forces, and less space in which car occupants can decelerate before striking a car's dashboard or side pillars. It's true that safety features like air bags and pretensioned seatbelts can make small cars safer... but they make large ones safer as well. And so the stubborn fact remains that, for similarly designed vehicles, larger and heavier means *safer*.



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Car buyers always make trade-offs among various vehicle attributes. CAFE, however, has severely reduced their choices by imposing across-the-board miles-per-gallon standards that each carmaker must meet on a sales-weighted average. The first CAFE standard for passenger cars, in 1978, was 18 MPG. It's currently 27.5 but, by 2016, it will be a whopping 39. And last September, a NHTSA study suggested an astounding 62 MPG as a target for 2025. That's what every carmaker

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would have to meet on average, meaning that every large-size car with an MPG rating below 62 would have to be offset by some miraculous mini-vehicle with a rating above 62. By comparison, even the most gas-stingy hybrids today get no better than about 40 MPGs.

A 2001 National Academy of Sciences study estimated that the traffic death toll attributable to past downsizing was approximately 2,000 lives per year. That is a huge price to pay for saving oil, and it will get even deadlier as CAFE gets pushed up. But don't expect to hear about it from NHTSA; you'd think that an agency whose middle name is *safety* wouldn't dare run a program that kills people, but you'd be wrong. In the early 1990s, my organization sued NHTSA for covering up CAFE's deadly effects. In blistering language, a federal appeals court found that the agency had used "fudged analysis" and "bureaucratic mumbo jumbo" to duck the issue. If a private company had been found guilty of concealing a product defect in that manner, it would have been out of business within days. But CAFE is a political program, and so not only is it still around, it's getting worse by the year.

Nor will you hear about CAFE's death toll from the usual auto-safety advocates. In 1989, Ralph Nader forthrightly stated that "larger cars are safer—there is more bulk to protect the occupant. But they are less fuel efficient." But as large cars became politically incorrect, Nader switched and became one of CAFE's strongest boosters.

For honest advice these days on safety and car size, you

have to forget the Feds and the Ralph Naderites and *Consumer Reports*. Go to the auto insurance industry, with its direct stake in evaluating car safety and its decades of collision data. The advice of the Insurance Institute for Highway Safety is simple; when it comes to safety, size and weight are "the first things crashworthiness attributes to consider."

So as you watch Mr. X drive off in his micro-car, do you hope that he buckles up?

Is It Getting Dark Yet?

It's late in the day, and you switch on your lights as you go back into your house. Mr. X didn't get around to mentioning it, but those incandescent bulbs you're using are doomed. As of January 1, 2012, the sale of traditional 100-watt bulbs will be illegal. The 75-watters will be banned in 2013, and 60- and 40-watt bulbs the year after.

That's Congress looking out for you again. It figures that, given all the advantages of compact fluorescent lights (CFLs) over Thomas Edison's outdated incandescents, Americans have no good reason not to switch—after all, CFLs last longer and use less energy. Other countries have already taken the lead in banning incandescents, so what's not to like?

Well, for starters, there's the fact that CFLs have some pretty severe disadvantages. They cost more, they often burn out long before their much-touted 10,000-hour lifetime, and they can't be used with timers or outdoors in cold weather or in

recessed downlight fixtures. In fact, they can't be used in some of the most ordinary of fixtures, like the three-bulb sockets on many household ceilings; try putting a CFL in each of those sockets and you'll probably find that the glass fixture won't fit back on. Put in just one CFL and it will flicker, because CFLs apparently can't tolerate bulb diversity (a trait they seem to share with CFL advocates).

Turn on a CFL and it may take a minute or more to reach full brightness, so good-bye to that beloved phrase "at the flick of a switch."



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CFLs contain minute amounts of mercury, which causes some environmentalists to worry about disposal issues. This led EPA (a name you can trust by now) to issue guidelines on how to clean up a broken CFL: Step One: "Open a window and leave the room for 15 minutes or more."

For years we've heard that new CFLs were a fully developed technology, far better than the fluorescent bulbs of old. But now it turns out that even the newer CFLs had their problems, as evidenced by this statement from The Light Source: "If you were disappointed by the performance of CFL bulbs in the last few years, it's time to try again." We heard the same thing

about low-flow toilets—first that they were fine, later the admission that there were problems, then that those problems were fixed, and, later still, the promise that, this time around, the problems have *really* been fixed. Wanna bet?

Do CFLs actually reduce our consumption of electricity? Even for this seemingly unquestionable claim, the answer isn't clear. In 1987, the town of Traer, Iowa, persuaded most of its residents to turn in their incandescent bulbs for free fluorescents. The results? Electricity use *increased* by nearly 10 percent. People figured that, because running the new lights was cheaper, they might as well keep them on longer.

Most importantly, there's the light itself—many people just hate it. They find it depressing, color-draining, sickly, headache-inducing, and morgue-like, with distracting flickers and annoying buzzes that none of their CFL-loving friends seem to sense ("electrical embalment," one blogger called it). And a *New Yorker* cartoon featured a manager showing a visitor around his company's cubicle-filled floor, explaining that "the dim fluorescent lighting is meant to emphasize the general absence of hope."

What makes Congress think that it has any business dictating the bulbs we can use in our homes? Political audacity, plain and simple. Energy efficiency has become a feel-good mantra for politicians to invoke at will. And because energy-efficiency mandates are regulations rather than government taxes or expenditures, they're relatively invisible to the public at large. Energy itself is now a bad thing—the cause of the alleged global warming crisis and the urban sprawl crisis and the obesity crisis—and more demonized these days than even, well, tobacco.

To this sort of audacity, there is one appropriate response: take your middle finger and flip your switch in the spirit of that biblical invocation "let there be light." **CM**

Sam Kazman is general counsel of the Competitive Enterprise Institute, a free-market advocacy organization, www.cei.org.