

Energy Incrementalism

A Good (But Not Great) Alternative Fuel Policy

Paying homage to the goal of “energy independence” has become a rite of passage for American politicians, whether left, right, or center. On the left, finding alternative sources of energy is seen both as the route to peace on earth (since most wars are supposedly wars for oil) and the only way to save the earth (since fossil fuels are destroying the planet). On the right, energy independence is seen as essential to preserving American prosperity while limiting foreign entanglements in a dangerous Middle East.

More complicated, however, is President Bush’s rhetoric of energy independence, since he is neither a conservationist nor an isolationist. Is it conventional political pandering devoid of substance, or a serious attempt at an energy policy shift? Is it grounded in real technological and political possibilities, or just foolish utopianism that will undermine the nation’s capacity to make sober policy decisions at the bloody crossroads where oil, Islam, and energy markets meet? How should we assess President Bush’s particular brand of energy idealism, if it is in fact unique from that of his predecessors?

In every State of the Union address of his presidency, President Bush has talked about the need to secure additional energy supplies and to lessen the country’s “dependence” on Middle Eastern oil. His strongest statements

came in 2006, when he described U.S. reliance on oil as an “addiction” and portrayed the Middle Eastern oil cartel as a kind of petro-mafia, which profits from our addiction and uses our money to fund Islamofascism.

President Bush’s point did not seem to be that our modern, highly-energy-dependent lifestyles are morally suspect, an indictment others have made in the past (think of the obloquies leveled against SUV drivers). Rather, the president seemed to be saying that in a country whose greatest sources of pride are political liberty and technological progress, it is a national humiliation that we continue to imperil our freedom because we are short on ingenuity. Energy independence is not the route to a more realist isolationism; it is the route to a more vigorous, more idealistic internationalism, uncorrupted by the need to coddle the world’s vexatious oil dealers.

In his 2007 State of the Union address, President Bush focused specifically on how our oil-rich enemies could paralyze America’s economy and thus undermine both its national interests and national power. America’s dependence on foreign oil, he said, “leaves us more vulnerable to hostile regimes, and to terrorists, who could cause huge disruptions of oil shipments, and raise the price of oil, and do great harm to our economy.” The lofty rhetoric of energy independence was, in a sense, brought

down to earth; energy idealism has been replaced with what might be called a new “energy incrementalism.”

This latest iteration of American energy policy is less reliant on miracle technologies—like hydrogen cells—than was the policy of President Bush’s first term. Nor does it put much faith in statist conservation initiatives. Instead, it highlights the importance of modest shifts in the types of energy we use and seeks to spur investment in readily available alternative sources of energy. This approach is grounded in a specific hypothesis: not that we are on the cusp of a post-oil age, but that we already possess the domestic resources and technological capacity to lower U.S. oil consumption enough to limit the impact of Middle Eastern affairs on U.S. financial markets and thereby deflate the economic and political power of unsavory regimes. Despite the president’s rhetoric, this policy does not actually aim to achieve “energy independence,” *per se*; it aims to moderate the leverage of Middle Eastern countries by moderating American demand for their oil. Or to use the president’s addiction metaphor: it’s a methadone policy, not a cold-turkey policy.

But do the details of the Bush plan support the Bush hypothesis? The central goal of the Bush proposal is to reduce the amount of petroleum-based gasoline consumed in the U.S. by 20 percent over the next 10 years. To achieve this reduction, the plan—nicknamed “20 in 10”—calls for 35 billion gallons a year of biofuels to be produced and blended into U.S. fuel supplies.

These biofuels would be made from homegrown crops like corn, switch grass, soybeans, and other agricultural materials and refuse, altogether replacing about 15 percent of the gasoline now used. The other 5 percent savings would supposedly come from improved fuel efficiency standards for cars and light trucks, although efforts to toughen those standards have generally been political flops since their introduction in 1975 following the Arab oil embargo.

In practical terms, to speak of American biofuels today means one thing—corn-based ethanol. The Bush plan is to alter America’s energy portfolio by giving ethanol a massive boost via federal production mandates, financial incentives, and research and development funding. If this seems a bit too easy, it probably is.

The U.S. consumes roughly 385 million gallons of gasoline each day (or 141 billion gallons per year), according to Energy Department figures for 2005, the last year figures are available. Under legislation passed by Congress in 2005, fuel companies must blend 7.5 billion gallons of renewable fuels into the nation’s fuel supply by 2012. Those renewables will displace about 4 billion gallons of gasoline from the nation’s fuel supply in 2012, according to the administration. It’s worth noting, however, that the biofuels industry is expected to overshoot the 7.5 billion gallons benchmark; according to an Energy Department estimate, the United States could be producing more than 11 billion gallons of ethanol by 2012.

President Bush's latest proposal would ratchet up these requirements to the more ambitious goal of incorporating 35 billion gallons of "renewable and alternative" fuels in the U.S. supply by 2017. According to the administration, this would displace 15 percent of *projected* annual gasoline use in 2017. But since consumption levels are expected to increase over the next ten years, that 15 percent reduction isn't likely to reduce oil consumption below today's levels. In fact, analysts who have crunched the numbers say the president's plan will, at best, translate into gasoline consumption staying roughly flat for a decade. In other words: by using more ethanol over the next decade, we'll use less oil than we otherwise might have. But even if we meet the Bush biofuel targets, we'll probably still use more oil a decade from now than we do today.

To see what this means in geopolitical terms—the major reason for supporting ethanol in the first place—we need to trace gasoline supplies back to their origins. The U.S. consumes about 21 million barrels of crude oil each day, with roughly 10 million barrels of this demand satisfied by imports. As of January 2007, four countries export more than 1 million barrels of petroleum per day to the United States, according to the Energy Department: Canada (1.9 million), Saudi Arabia (1.6 million), Mexico (1.4 million), and Nigeria (1.1 million). Venezuela came close to the million mark with 955,000 barrels a day. These five countries together accounted for 68 percent of U.S. petroleum imports.

Of course, these different countries don't all raise the same geopolitical concerns. The real problem is the Middle East—chiefly Saudi Arabia, Iraq, and Kuwait—which supplies about 17 percent of America's import needs. We also know that, unless our energy portfolio changes, this figure will rise in the years ahead, since, as one analyst recently pointed out, Persian Gulf countries sit atop 65 to 70 percent of the world's known remaining oil reserves. This is our predicament, and government-mandated ethanol production cannot save us, even if it can help us.

At today's levels, it would be a real achievement to reduce U.S. oil consumption by 10 percent, or 2 million barrels per day—seducing us into believing that we wouldn't need the Saudis after all. The trouble is that by 2017, when such a reduction might hypothetically be realized via domestic biofuels, 2 million barrels a day will be a smaller piece of the American energy portfolio and thus significantly less valuable in geopolitical terms, because the total size of the portfolio (like the overall economy) will likely be larger. By conflating present benchmarks and future projections, the Bush administration makes a genuine achievement in promoting biofuels seem like a panacea for our geopolitical ills, when in fact we will likely remain as reliant upon troublesome sources of oil as ever despite this new policy.

The Bush plan, despite being oversold, is not without merit. It gets us on the road to producing and consuming

substantial quantities of fuel that are interchangeable with petroleum and can use the same pumping stations and infrastructure in place today. And for the first time, financiers are betting seriously on ethanol. An impressive 75 percent of venture capitalists recently surveyed said they believe President Bush's biofuel targets are attainable; they are backing up this optimism with rapidly growing levels of investment. Roughly \$813 million of the energy technology investments made in 2006 went to the biofuels sector, up from \$20.5 million in 2005, according to a new report from the research firm Clean Edge. This enthusiasm among the investor class is a far different reaction from the days when President Carter proposed a national research agenda to develop a synthetic fuel to replace oil.

Almost all of the ethanol produced today comes from the nation's corn crops. Critics rightly point out that the limits of the nation's corn fields will quickly be reached, that producing fuel from corn isn't the most energy efficient way to power vehicles, and that without subsidies the industry wouldn't exist. But there is plenty of evidence indicating that the ethanol market will experience a second wave in the next five years, as companies begin producing the fuel from other agricultural products in large, commercially available quantities. A number of big U.S. companies are already working on technologies that will make the manufacture of ethanol more energy efficient, as well as new tech-

niques to turn cellulosic material into ethanol. Corn will continue to be used as a feed stock, but so will sugarcane bagasse and wheat straw. Congress is expected to begin work on new legislation this summer that will give refiners greater incentives to blend fuel with cellulosic rather than corn-based ethanol. In addition, the Bush administration is working to promote other kinds of alternative fuels, including methane, butanol, natural gas, and liquid fuels derived from coal.

But for all the good the Bush plan could achieve, it brings us no closer to the vaunted age of energy independence; at best, it only prevents our "addiction" to Middle Eastern oil from getting worse than it now is. As much pride as we take in our technological prowess, we need to confront the fact that technological innovation alone will not liberate us from the perils of politics or from the unpleasant choices and unsatisfying compromises that American power and American responsibility require. We need oil to be wealthy; our wealth makes us powerful; and we use our power to promote liberty and fight tyranny. Shunning oil as a viable source of energy today won't grant the U.S. a free pass from involvement abroad.

In confronting this predicament—or series of predicaments—we need to wonder whether the rhetoric of energy independence, with its promises of national autonomy, is a useful motivator that will make us as self-reliant for our energy needs as possible, or a utopian standard that deforms

good policymaking. Like the rhetoric of democratization, words have consequences—sometimes inspiring us to noble purposes, sometimes blinding us to harsh realities. And when it comes to energy, this may be the harshest reality of all: in order to defeat our oil-rich enemies over the long-term, we

may need to keep making them rich in the short term. This may be hard to swallow, but we have the misfortune not to live in a lollipop world.

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