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The Road to Energy Independence

Conservation and alternative fuels are worthwhile ways to lessen U.S. dependence on foreign oil, but the immediate answer is efficiency

We have reached one of those rare moments of broad societal accord. We all agree the U.S. has become overly dependent on fossil fuels, particularly foreign oil. We all want to do something substantive to eliminate the dependency. The consensus transcends party affiliation, occupation, income level, or age.

Yet astonishingly, that consensus has been accompanied by a virtual absence of leadership -- particularly from Washington. President George W. Bush, in his State of the Union address, belatedly acknowledged our "addiction" to foreign oil. He proposed a national goal to replace more than 75% of our oil imports from the Middle East by 2025, and trotted out vague "new technologies" as the solution.

Yet on the one rare occasion while the entire country stands united towards a common goal, Washington can't imagine a real plan, let alone inspire the public to individual action. Our country isn't addicted to "foreign oil" in particular -- we're addicted to energy in general- and the President's plan only substitutes one drug for another.

NO SILVER BULLET. It doesn't have to be this way. A careful look at the underlying numbers, followed by simple, appropriate actions, could lead us to twice the real fuel savings, in half the time targeted by President Bush -- in other words, a 30% reduction in total energy use by 2015. And it can be achieved with a virtual absence of economic and societal pain.

Moreover, we could achieve these goals by utilization of currently available technologies, with no need to engage in expensive searches for supposed energy-policy "silver bullets" like hydrogen power. The result would be more efficient use of the energy we already have at hand -- and automatic reduction of CO2 emissions into the atmosphere.

Efficiency offers the clearest, most easily traversed path to energy independence. Not conservation, not production, not alternative fuels.

OIL DRAIN. Don't get me wrong. I'm in favor of conservation, more production and, especially, renewable energy. But time is of the essence, and none of these is straightforward. Insufficient numbers of people will conserve energy by turning down thermostats or buying compact cars.

And domestic energy producers won't be able to extract oil that isn't there. Despite the smoke-and-mirrors thrown up by vested interests, the world is running out of oil. Chasing more production is a poor use of limited economic resources. Alternative fuels will eventually become an economic reality, but we need action now.

And efficiency is different. Consider the government's Energy Star program, which set energy-efficiency standards and made them visible to producers and consumers alike with those ubiquitous yellow stickers on major appliances. Energy Star then let the free market sort out solutions. Today, refrigerators consume five times less power, are more reliable, and emit no greenhouse gases. And the policies that created refrigeration efficiencies left neither economic pain nor major controversy in their wake.

BULB CHANGE. We require these kinds of policies throughout the economy. Take just two areas where greater emphasis on efficiency would make all the difference -- diesel fuel and electricity.

Diesel-powered automobiles consume 20% to 40% less energy than gasoline for the same mileage. Unlike hydrogen power - an awkward and inefficient automotive fuel system -- this mature technology requires no sacrifice of performance.

And as for electricity, more than 25% of all electricity is used for lighting. We could eliminate 90% of all electricity used for lighting by switching to so-called smart LEDs, which are already eight times more efficient than incandescent lighting and, over the long-term, less costly. Leaving computers and TVs on "standby" wastes another 7% of all electricity. Architectural changes that make better use of daylight and solar heat gain could save an additional 15% of all building energy use.

Those are but two examples of opportunities for greater energy efficiency. Phasing-in LED lighting and diesel engines would, by themselves, achieve my proposed goals. But to really catalyze change, we need a combination of public and private initiatives.

MEASURE AND MOTIVATE. First we need to measure. Tag all energy-consuming devices with an estimated yearly energy cost, and provide suggestions on how that cost could be reduced. Install energy meters on every new home -- and any renovation greater than \$10,000 -- showing in dollar value how much electricity, hot water, and other resources are being used. You can only save what you can see, and such meters would encourage consumers everywhere to take energy savings into their own hands.

Then there's a need to motivate. Establish energy cost-sharing programs for those projects that both save energy and increase productivity (see BW Online, 05/31/05, "[Policy that Rewards Productivity](#)"). For example, the government could help offset the cost of improved diesel catalytic converters in exchange for their vastly improved fuel economy. Or, it could offset the added cost of a power meter on an outlet strip, which would motivate people to turn off computers at night.

Other incentives include developing energy teaching modules and weaving them into the No Child Left Behind program, as well as granting National Medals of Freedom to the greatest contributors to energy independence.

GOVERNMENT MANDATE. Finally, the government must mandate. Specifically, it should set standards on all new buildings and renovations above \$25,000 to improve energy efficiency by 5% compared to benchmarks, with the benchmarks rising over time. Any excess above 5% could be traded in for credit on other projects. And government should raise Corporate Average Fuel Economy (CAFE) standards targets by 30% over the next 10 years. With diesel or hybrid power, this bold reduction is easily within reach, and cost effective over the life of the car. And, if you want, you could still drive your SUV.

We need Washington to lead, but we cannot wait to follow. Everyone can become more energy savvy. Buy a more efficient car and water heater. Install LED lights. Build your home with south-facing windows. Advocate for energy-sensitive local zoning codes. Save money by saving energy. And demand leadership. The price of deciding not to decide is simply too high.

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