

Energy Security

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Energy Security. We hear the term all the time, but what does it really mean? Do we mean national security? Well, sort of. Do we mean energy independence? Well, sort of that, too. Do we mean economic security? Yes, all of the above.

“Energy security” is probably best understood when taken literally. We need to be secure in our energy in terms of the source, i.e., where it comes from, control of the flow and distribution of that energy, and having alternatives in place to allow us to withstand highs and lows associated with any commodity. Unfortunately, the United States is the antithesis of a secure energy nation. We depend on foreign oil to the extent that our economy is precariously over the barrel—and any number of global events, including peaceful competition for supply, could cripple us beyond anything we have seen in our history.

U.S. gasoline consumption has grown to 140 billion gallons per year. Add to that a growing diesel fuel market of 45 billion gallons. Those gallons come from barrels, and most of those barrels come from countries other than ours. In fact, 55 percent of the total consumption of petroleum in the United States is imported. As recently as 1980 imports represented just 37 percent, but the Department of Energy estimates that by 2025 dependence will increase to nearly 70 percent. Obviously, we are headed in the wrong direction. And it is going to get worse, perhaps much worse.

Part of our complacency during the 1980s and 1990s (when we truly let our habit get out of hand) was due to the simple fact that imported oil, and our gasoline, were dirt cheap—too cheap to warrant serious efforts to develop alternatives. Some petroleum advocates argue that our supply of oil is not threatened because our suppliers need our money—and to get it the oil has to keep flowing. Out of the many flaws in that logic, there are two factors that go to the heart of the energy security debate. The first is to recognize exactly who we get that oil

from and where. The second is that our days of being the big volume buyer and ensuring a flow may be over. China, India and a number of developing countries are going to rival our thirst for oil, and at that point we may enter a new era of bidding for this imported, polluting, nonrenewable resource.

Where in the World Is the Oil?

Well, it certainly isn't in the United States. We consume 25 percent of the world's oil and have just three percent of the known reserves. That's like eating more than three times your own weight — a bit indulgent.

With regard to who does have the oil, another red herring the petroleum industry tosses around is to claim that our dependence on imports is not really a threat because we have diversified our sources. That's like continuing to hit yourself on the head with a hammer after looking at your bruises in the mirror; but it's OK — now you're using several smaller hammers to inflict the pain.

True, we currently import more petroleum from Canada and Mexico than from Saudi Arabia and Iraq. US imports of OPEC oil (Organization of Petroleum Exporting Countries) continue to be a whopping 43 percent, and 25 percent of that is from Persian Gulf countries. The flow from Canada and Mexico can reasonably be assured, so we have no problem, right? Even though we may be compliant enough to give these countries our money, that well may begin to run dry.

While the current supply is indeed spread out, the key to not repeating history is to look to the future and where our reserves lie. That begins to tell a different story.

Of the known oil reserves in the world, a mere 6 percent are in North America. Not the United States, not Canada, not Mexico — but all three countries combined. We are drawing down on those supplies at such a rate that most experts believe that, at current rates of production, many of these countries outside the Middle East are at or past their peak — and will steadily decline over the next 15 years. With paltry reserve numbers scattered across the globe, where

is all the oil the petroleum industry keeps telling us we have?

Saudi Arabia (25 percent), Iraq (11 percent), Iran (8 percent), United Arab Emirates (9 percent), Kuwait (4 percent), Libya (2 percent): Total from that U.S. friendly region is 66 percent of known global oil reserves. As the line of current sources of production going down crosses that of the aforementioned OPEC countries going up to fill the demand, the Middle East producers will again become the hub of the wheel. The need for military presence in that region to ensure the supply of oil will increase with the level of dependence and, as the Persian Gulf reasserts itself as the oil superpower, the United States may become an enabler by not only creating demand for the product but also providing the support to ensure supply.

New Kids on the Block

A long-term view of sources and demand could make our current situation something we long for 10 years from now.

According to the International Energy Agency (IEA), world oil consumption will increase by 60 percent by the year 2020. That is a mere 15 years from now. Often referred to as the sleeping giant, China is fully awake and bursting onto the world oil scene in a big way.

From its recent effort to purchase Unocal Petroleum for \$18 billion to its astonishing increase in automobiles, China is going to be a major customer for OPEC. IEA estimates China will increase its petroleum consumption eightfold by 2030 and will have more cars than the United States.

India, another giant lumbering into industrialized status, is right behind China's annual oil consumption increase of 7.5 percent per year with a projected 5.5 percent. Do we really want to get into a bidding war with Southeast Asia and its 35 percent of the world's population? These economies will be fueled by petroleum — they have little choice. They are constrained by technology, by capital, by infrastructure and by vision. But we in the United States are not.

Who Picks Up the Check?

We do. The 30-year anniversary of the Iranian oil embargo came and went in 2003 and our response was to import more oil. We just don't seem to get it. There are several crippling aspects to this addiction to foreign oil. The sheer dependence on forces out of our control for so much of our energy is poor planning. It is hard to imagine an intelligent populace putting itself in such a position. Occasionally we are reminded of this dependence when the slightest hiccup in the flow of oil immediately creates a shortage—real or perceived—that, in turn, immediately allows the petroleum industry to reach into the pockets of consumers. A pipeline malfunction in Russia, a pumping station mishap in Iran, an oil spill from a tanker — any of these can result in a shortage that affects the entire nation.

All driving Americans have become conditioned—because it is what we are told—to believe increased prices at the pump are due to factors out of our control. We mutter unprintables about “big oil,” Mideastern sheiks and others we choose to blame — and then go ahead and pay the increase. But what does 2 to 3 cents at the pump really mean in the context of a nation?

How about 20, 30, even 50 cents, which is more like what we have experienced over the recent months? At \$60 per barrel of oil and a daily importation of at least 10 million barrels, hmm, let's see. Six times ten, carry the six... The picture should be clear.

Even if oil drops to \$50 per barrel or less, it still represents a massive hemorrhage of U.S. dollars. There are the direct costs, like the 30 to 50 cents out of the pockets of our citizens. But there are also the hidden costs, ranging from cleanup of oil spills to the increased military presence in the Middle East. On the direct side, the increase of 50 cents per gallon on a multi-car family represents a net cost increase to them of anywhere from \$500 to \$1,000. At a 30 percent tax rate, they had to make \$1,300 to buy that fuel. That is money that might be used for any number of purposes, not the least of which is to regenerate their own community if the fuel could be produced locally. That would mean the money is spent at the local hardware store, the dry cleaners, or the diner. But now that money is in the Persian Gulf.

From the standpoint of the big picture, the key link to this outflow of cash is the trade deficit. A trade deficit indicates that the United States imports more goods and services than it exports. Petroleum imports account for approximately 35 percent of America's current trade deficit. Some projections suggest that petroleum imports will rise to over 60 percent to 70 percent of the U.S. trade deficit in the next 10 to 20 years.

Based on annual increases, that may not be far off. In 1987, the United States trade deficit in crude oil was \$27 billion. In 1990, that figure nearly doubled to \$43.7 billion and by 1999 increased to \$59.2 billion. In 2002 the United States spent just under \$110 billion on foreign oil, representing a massive transfer of U.S. wealth to foreign countries. One reason for the increases in the trade deficit is the continued growth of the transportation sector, where 97 percent of our transportation fuel is derived from petroleum. The U.S. Department of Commerce estimates that for every billion dollars in trade deficit, the United States loses more than 19,000 jobs. In the last 10 years, the total of U.S. trade deficits has exceeded \$1 trillion. This persistent pattern has contributed significantly to declining real wages and to increasing job insecurity. Most of its victims are middle-income working people. It is estimated that the manufactured goods trade deficit represents a loss of some three million American jobs, according to the AFL-CIO Executive Council. In the July 2005 Bureau of Economic Analysis release by the Department of Commerce, it was stated that, "The trade deficit for the month of May 2005 — one month — was \$55.3 billion — more than the entire year in 1984."

The other key financial repercussion of the dependence on oil as it relates to dollars also hits U.S. citizens and consumers in the wallet through taxes: taxes needed for the military.

Ethanol and Biofuels as a Replacement for Oil

As noted, the United States has the technology, capital, infrastructure and government support in place to develop non-petroleum sources of energy. It should be understood that no rational energy strategy should start from the premise that we are going to *replace* oil. That simply is not going to happen. The sheer volume of our reliance on oil to fuel our transportation system makes that impossible. Plus, the petroleum industry has provided the

United States with a comprehensive, efficient and reliable distribution system that gives us the very mobility we seek. Therefore, any alternatives should be viewed in terms of their ability to augment the existing system. In the case of ethanol, there is a reason it is the "last man standing" in the alternative-fuels race of the 1990s. Ethanol extends our petroleum supplies within the existing auto and refueling infrastructure.

When we talk about energy security, national security and economic security, ethanol is part of all of these, but not all of any one of them. It's a piece of the puzzle, but a key piece.

Provisions in the new federal energy legislation passed in July 2005 will result in an increase in domestic ethanol use that will reduce U.S. oil imports by 80,000 barrels per day. At current oil prices, ethanol would keep close to a half million U.S. dollars here at home every single day.